DOCUMENT RESUME

ED 386 889 EC 304 280

AUTHOR	Algozzine, Bob; Ysseldyke, James
TITLE	Strategies and Tactics for Effective Instruction.
REPORT NO	ISBN-0-944584-41-1
PUB DATE	92
NOTE	205p.
AVAILABLE FROM	Sopris West, 1140 Boston Ave., Longmont, CO 80501 ($29.95).
PUB TYPE	Books (010) -- Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Classroom Techniques; Delivery Systems; Educational Planning; *Educational Principles; *Educational Strategies; Elementary Secondary Education; Evaluation Methods; *Instructional Improvement; Research and Development; *Student Evaluation; *Teaching Methods; Theory Practice Relationship

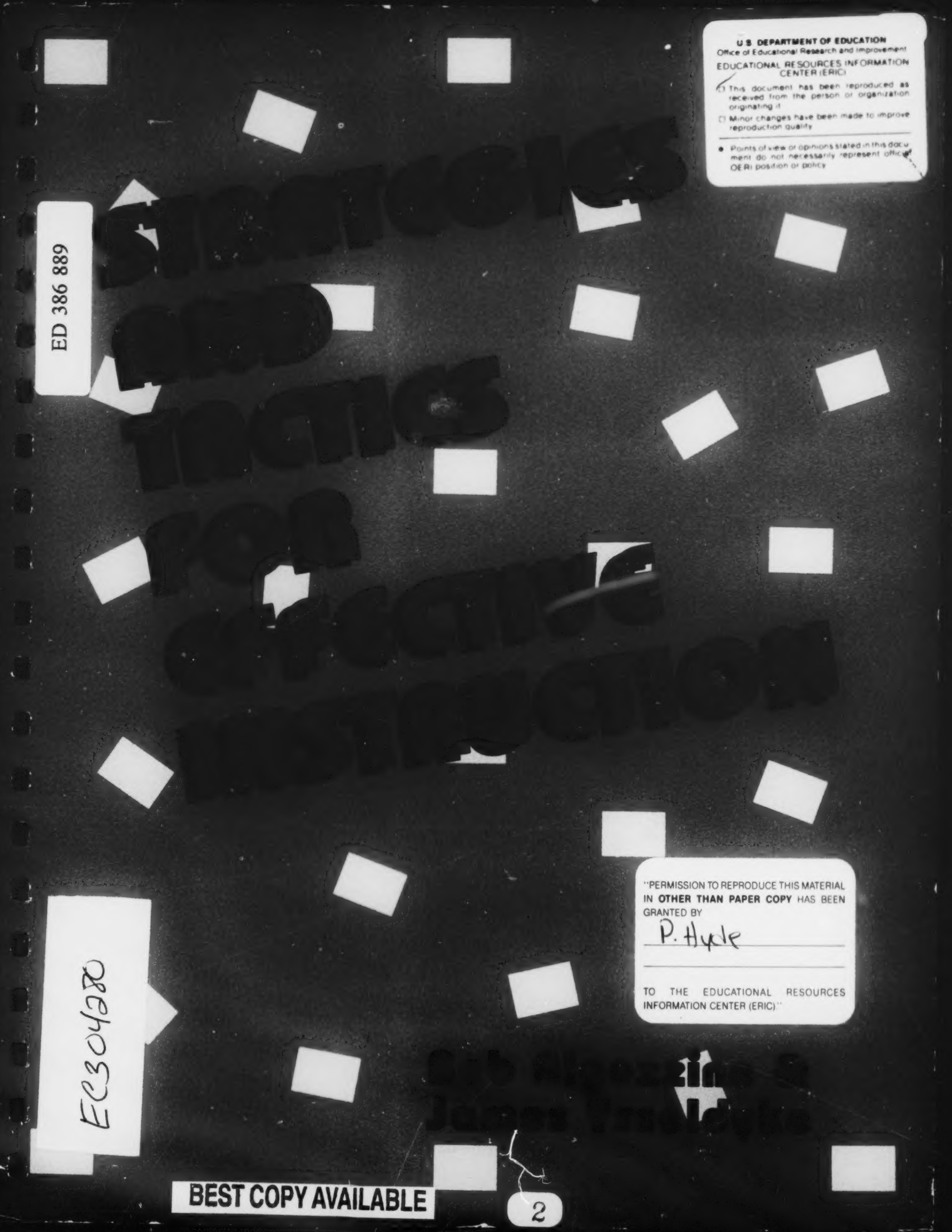
ABSTRACT

This book presents an instructional improvement system based on critical instructional factors identified by research. Teaching activities are provided for each of four components of effective teaching--planning, managing, delivering, and evaluating instruction. For each component, several teaching principles are identified and explained, and for each principle, several general strategies and specific tactics are suggested. Principles include deciding what to teach, deciding how to teach, communicating realistic expectations, preparing for instruction, using time productively, establishing a positive classroom environment, teaching thinking skills, motivating students, providing feedback, providing relevant practice, keeping students actively involved, modifying instruction, monitoring student understanding, monitoring engaged time, maintaining records of student progress, informing students of progress, using data to make decisions, and making judgments about student performance. (Contains 24 references.) (DB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it
☐ Minor changes have been made to improve reproduction quality
● Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

ED 386 889



Strategies and Tactics for Effective Instruction

"PERMISSION TO REPRODUCE THIS MATERIAL IN **OTHER THAN PAPER COPY** HAS BEEN GRANTED BY
P. Hyde
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EC304280

Bob Algozzine &
James Ysseldyke

BEST COPY AVAILABLE

Strategies and Tactics for Effective Instruction

Bob Algozzine & James Ysseldyke

Copyright © 1992-1995 (Fourth Printing) by
Bob Algozzine and James Ysseldyke
All rights reserved.

ISBN #0-944584-41-1

Published and Distributed by:

Sopris West
1140 Boston Avenue • Longmont, CO 80501 • (303) 651-2829

Acknowledgments

This product is the result of collaborative efforts to identify ways to teach difficult-to-teach students more effectively. The components, principles, and strategies that are presented were derived from research on effective teaching; our colleagues in regular and special education contributed to that research and we are thankful for the comprehensiveness of their efforts. We believe the most important aspects of effective teaching are tactics that bring broad components, general principles, and specific strategies of effective instruction to life. The tactics that we have included are illustrations of how classroom teaching can be altered in implementing strategies for effective instruction. Most of the tactics come from our own experience teaching students in regular and special education classes; some were contributed by other professionals. We are especially grateful to Gloria Weinstein, a teacher at Berryhill Elementary School, and Kate Algozzine, a teacher at Providence Day School in Charlotte, North Carolina, for tactics and critical review of our efforts to produce a compendium of information for use in improving classroom instruction. We thank Ray Beck for pointing us in a new direction, and Duane Webb and Stu Horsfall at Sopris West for making the trip there so exciting.

As with all our professional work, *Strategies and Tactics for Effective Instruction* represents a collaborative effort that speaks for both of us.

The following individuals contributed tactics during the development of this product.

Roberta Dolan
New Britain Public Schools
New Britain, CT

Michael Cicchetti
New Britain Public Schools
New Britain, CT

Joan Williams
North Haven Public Schools
North Haven, CT

Nancy Weismuller
North Stonington Public Schools
North Stonington, CT

Perri Milligan
North Stonington Public Schools
North Stonington, CT

Lucy Krause
Plainfield Public Schools
Plainfield, CT

Joan DeLea
Plainfield Public Schools
Plainfield, CT

Cynthia Arno
Plainfield Public Schools
Plainfield, CT

Phyllis LaRose
Plainfield Public Schools
Plainfield, CT

Melissa Wrigley
Plainfield Public Schools
Plainfield, CT

Susan DuBois
Plainfield Public Schools
Plainfield, CT

Rosemarie Rose
Project LEARN
East Lyme, CT

Joyce Rak
Middletown Public Schools
Middletown, CT

Nancy Davis
Regional School District #10
Burlington, CT

Carissa Keepin
Regional School District #10
Burlington, CT

Anne Bailey
Regional School District #10
Burlington, CT

Lucy Mehta
Regional School District #10
Burlington, CT

Barbara Wright
Simsbury Public Schools
Simsbury, CT

Lucille Burke
Simsbury Public Schools
Simsbury, CT

Susan Ewart
Torrington Public Schools
Torrington, CT

Pamela Dsurilla
Torrington Public Schools
Torrington, CT

Mary Chinigo
Voluntown Public Schools
Voluntown, CT

Linda Christensen
Voluntown Public Schools
Voluntown, CT

Dorothy Bates
Winchester Public Schools
Winsted, CT

Regina Bunel
Winchester Public Schools
Winsted, CT

Donna Murphy
Project LEARN
East Lyme, CT

Susan Ledder
Avon Public Schools
Avon, CT

Donna Beaudoin
Avon Public Schools
Avon, CT

Donna Benito
Bolton Public Schools
Bolton, CT

Charlene Carter
Bridgeport Public Schools
Bridgeport, CT

Evelyn Lowe
Bridgeport Public Schools
Bridgeport, CT

Debbie Kittredge
Bridgeport Public Schools
Bridgeport, CT

Robert Fairchild
Danbury Public Schools
Danbury, CT

Dona Petruccelli
Danbury Public Schools
Danbury, CT

Sheila Sherwood
Greenwich Public Schools
Greenwich, CT

Nancy Eberhardt
Greenwich Public Schools
Greenwich, CT

Lynn Winslow
Greenwich Public Schools
Greenwich, CT

Josephine Gleeson
Greenwich Public Schools
Greenwich, CT

Virginia O'Neill
Middletown Public Schools
Middletown, CT

Sharon Smith-Wahto
Bellingham, WA

Karen Tracy
Bellingham, WA

Tina Hinds
Bellingham, WA

Bob Sampson
Bellingham, WA

Erin Hough
Bellingham, WA

Sheila Fox
Bellingham, WA

Linda Schleef
Bellingham, WA

Jenny Baker-Couch
Bellingham, WA

Tammy Koch
Sedro Woolley, WA

Kathy Shore
Bellingham, WA

Kama Nelson
Bow, WA

Ken Howell
Bellingham, WA

Rocco Louis Latino
Western Washington University
Bellingham, WA

Colleen Hankinson
Bellingham, WA

Karen Goodwin
Lynden, WA

Kathy Otten
Bellingham, WA

Stephen Nash
Bellingham, WA

Marianne Kirner
SERRC
Middletown, CT

Lynn Pennington
Hartford, CT

Ange Evoy
Port Moody, British Columbia
CANADA

Carol Penner
Coquitlan, British Columbia
CANADA

Table of Contents

Overview 1

Planning Instruction 15

PRINCIPLE: Decide What to Teach 19

PRINCIPLE: Decide How to Teach 33

PRINCIPLE: Communicate Realistic Expectations 45

Managing Instruction 51

PRINCIPLE: Prepare for Instruction 55

PRINCIPLE: Use Time Productively 69

PRINCIPLE: Establish Positive Classroom Environment 85

Delivering Instruction 97

PRINCIPLE: Present Instruction 101

PRINCIPLE: Teach Thinking Skills 115

PRINCIPLE: Motivate Students 125

PRINCIPLE: Provide Feedback 135

PRINCIPLE: Provide Relevant Practice 143

PRINCIPLE: Keep Students Actively Involved 153

PRINCIPLE: Modify Instruction 163

Evaluating Instruction 171

PRINCIPLE: Monitor Student Understanding 175

PRINCIPLE: Monitor Engaged Time 183

PRINCIPLE: Monitor Student Activity 189

PRINCIPLE: Maintain Records of Student Progress 193

PRINCIPLE: Use Data to Make Decisions 202

References 207

Index 209

Overview

The recent wave of school reform has emphasized more than ever the needs of students that are not being met by the educational system (e.g., disadvantaged, dropouts, students at risk). Reconstruction of the educational system is seen as necessary to prepare children for the next century.

We are sympathetic to the goals of the reform movement. Yet the needs of individual students cannot wait for massive system-wide reform. Similarly, individual teachers who have identified particular curricular or instructional needs should not have to wait until their school or district has initiated reform efforts before receiving help in meeting those needs. We believe that education can be improved if "we think globally, but act locally." Individuals make a difference in this profession. Quality in education happens when teachers design and implement programs using effective instructional practices designed to meet local and personal needs.

To help educators effect instructional improvement, researchers have created a body of knowledge around the question of what works in instruction. They have identified proven effective instructional processes in what has become known as the effective schools or effective instruction literature. For example, Christenson, Ysseldyke, and Thurlow (1989) identified ten factors that contribute to instructional outcomes for students. These factors can be divided into four components of instruction—planning instruction, managing instruction, delivering instruction, and evaluating instruction (Figure 1).

FIGURE 1

Components of Effective Instruction

COMPONENT	
Planning Instruction	The degree to which teaching goals and teacher expectations for student performance and success are stated clearly and are understood by the student
Managing Instruction	The degree to which classroom management is effective and efficient The degree to which there is a sense of positiveness in the school environment
Delivering Instruction	The degree to which there is an appropriate instructional match The degree to which lessons are presented clearly and follow specific instructional procedures The degree to which instructional support is provided for the individual student The degree to which sufficient time is allocated to academics and instructional time is used efficiently The degree to which the student's opportunity to respond is high
Evaluating Instruction	The degree to which the teacher actively monitors student progress and understanding The degree to which student performance is evaluated appropriately and frequently

These authors believe that teachers must focus on the needs of individual students and outline the following instructional factors that are necessary for individual student achievement.

CRITICAL INSTRUCTIONAL FACTORS

1 The degree to which goals and expectations for performance and success are stated clearly and understood by the student.

Effective teachers

- set clear goals.
- set high expectations.
- demand high success rates.
- check for student understanding.
- provide direct and frequent feedback.

2 The degree to which classroom management is effective and efficient.

Effective teachers (managers)

- select a few essential classroom rules and procedures, and explicitly communicate expectations about classroom behavior.
- handle behavioral disruptions promptly.
- have an ongoing surveillance system.
- develop a sense of accountability and responsibility in their students.

Effective classrooms are those in which

- well-established instructional routines are used (e.g., students know how to get help, where the materials are, procedures for breaks).
- transitions are brief.
- considerable time is allocated to instruction.
- classroom interruptions are held to a minimum.

3 The degree to which there is a sense of positiveness in the school environment.

Effective school environments are those in which there is

- an academic focus with a humanistic orientation.
- a cooperative rather than competitive learning structure.
- order.

- strong administrative leadership.
- parent-teacher contact and collaboration.
- a belief among teachers that students can learn.
- a set of realistic, high expectations.

4 The degree to which there is an appropriate instructional match.

Effective teachers

- identify the student's level of skill development.
- analyze the demands of classroom tasks.
- match tasks to student aptitudes.
- analyze learning conditions in the classroom.
- assign tasks that are relevant to instructional goals.
- assure high student success rates.
- check for student understanding.

5 The degree to which lessons are presented clearly and follow specific instructional procedures.

Effective teachers

- use a demonstration-prompt-practice sequence (active teaching and learning).
- make instruction explicit (what, why, when, how).
- check for student understanding (what and how).
- systematically apply principles of learning (attention, reinforcement, variety).

6 The degree to which instructional support is provided for the individual student.

Effective teachers

- monitor and adjust instruction (adaptive instruction).
- model thinking skills.
- teach learning strategies.
- provide time needed to learn.
- provide considerable guided practice.

7 The degree to which sufficient time is allocated to academics and instructional time is used efficiently.

Effective teachers

- allocate sufficient time to instruction.
- get students actively engaged.
- engage in frequent, high-intensity student-teacher interaction.

8 The degree to which the student's opportunity to respond is high.

Effective teachers

- provide many opportunities for students to respond.
- provide specific error correction.
- alternate teaching strategies.

9 The degree to which the teacher actively monitors student progress and understanding.

Monitoring must be

- active.
- frequent.

10 The degree to which student performance is evaluated appropriately and frequently.

Evaluation must be

- frequent.
- congruent with what is taught (curriculum alignment).

WHATS IN STEI?

Strategies and Tactics for Effective Instruction (STEI) is an instructional improvement system that is based on the ten critical instructional factors identified by Christenson, Ysseldyke and Thurlow (1989). Teaching activities are provided for each of four components of effective teaching—planning, managing, delivering, and evaluating instruction (Figure 2). Teaching activities are presented at three different levels—principles, strategies, and tactics.

- **Principles** represent broad areas related to effective instruction (e.g., providing relevant practice).
- **Strategies** are general ways to implement teaching principles (e.g., provide students with help).
- **Tactics** are ways to implement strategies so that principles of effective instruction come to life in daily teaching. Each tactic is grounded in a principle or strategy drawn from instructional effectiveness research.

STEI provides specific ideas for each of the four components of effective teaching—planning, managing, delivering, and evaluating instruction. A diagram of the component—principle—strategy structure of STEI (Figures 3a, 3b, 3c) is provided on the following pages.

Each component contains several sections of teaching principles with related teaching strategies and specific teaching tactics (see Figure 4 for a complete example from the component on delivering instruction).

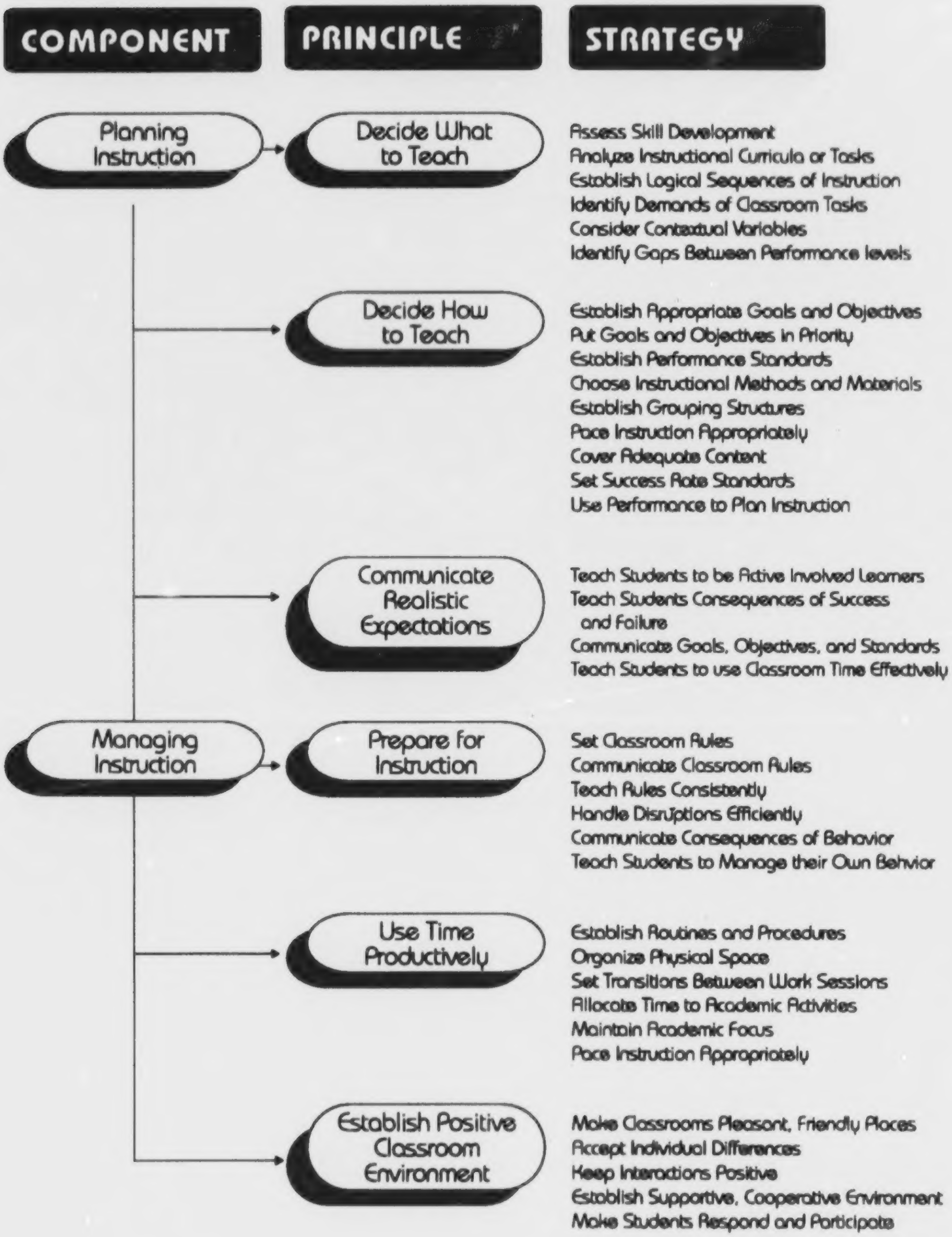
FIGURE 2

Teaching Principles for Four Components of Effective Teaching

Components	Principles
Planning Instruction	Decide what to teach.
	Decide how to teach.
	Communicate realistic expectations.
Managing Instruction	Prepare for instruction.
	Use time productively.
	Establish positive classroom environment.
Delivering Instruction	Present instruction.
	Teach thinking skills.
	Motivate students.
	Provide feedback.
	Provide relevant practice.
	Keep students actively involved.
	Modify instruction.
Evaluating Instruction	Monitor student understanding.
	Monitor engaged time.
	Maintain records of student progress.
	Inform students of progress.
	Use data to make decisions.
	Make judgments about student performance.

FIGURE 3a

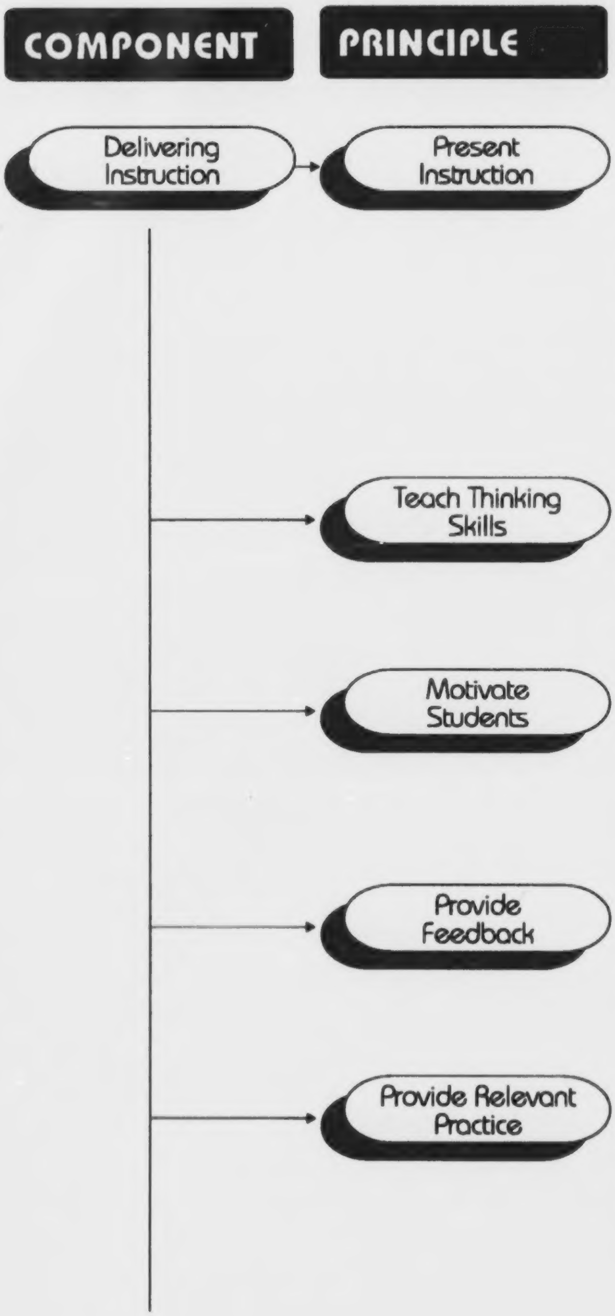
Diagram of Component-Principle-Strategy Structure of STEI



COMPONENT	PRINCIPLE	STRATEGY
Planning Instruction	Decide What to Teach	Assess Skill Development Analyze Instructional Curricula or Tasks Establish Logical Sequences of Instruction Identify Demands of Classroom Tasks Consider Contextual Variables Identify Gaps Between Performance levels
	Decide How to Teach	Establish Appropriate Goals and Objectives Put Goals and Objectives in Priority Establish Performance Standards Choose Instructional Methods and Materials Establish Grouping Structures Pace Instruction Appropriately Cover Adequate Content Set Success Rate Standards Use Performance to Plan Instruction
	Communicate Realistic Expectations	Teach Students to be Active Involved Learners Teach Students Consequences of Success and Failure Communicate Goals, Objectives, and Standards Teach Students to use Classroom Time Effectively
Managing Instruction	Prepare for Instruction	Set Classroom Rules Communicate Classroom Rules Teach Rules Consistently Handle Disruptions Efficiently Communicate Consequences of Behavior Teach Students to Manage their Own Behavior
	Use Time Productively	Establish Routines and Procedures Organize Physical Space Set Transitions Between Work Sessions Allocate Time to Academic Activities Maintain Academic Focus Pace Instruction Appropriately
	Establish Positive Classroom Environment	Make Classrooms Pleasant, Friendly Places Accept Individual Differences Keep Interactions Positive Establish Supportive, Cooperative Environment Make Students Respond and Participate

FIGURE 3b

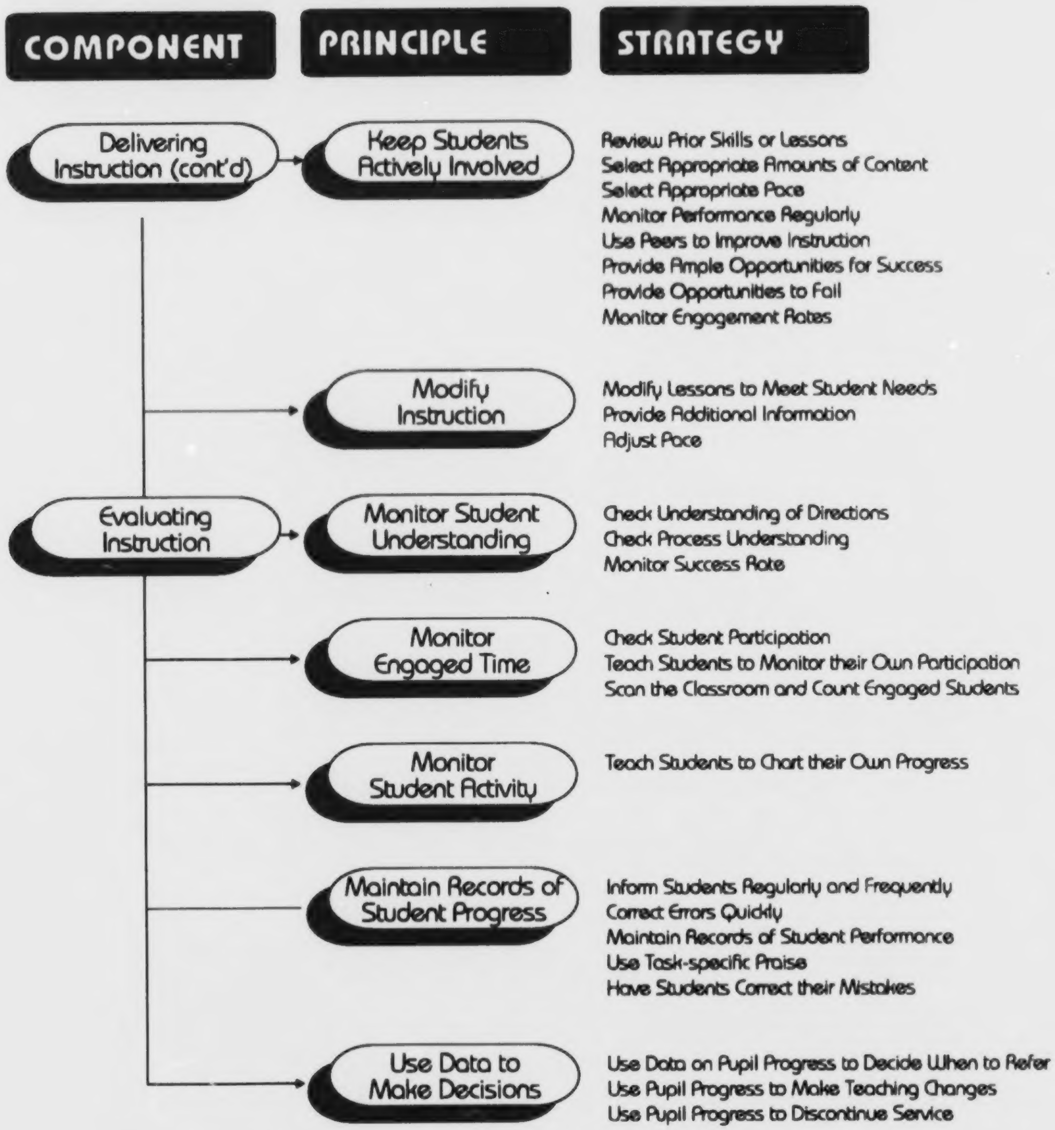
Diagram of Component-Principle-Strategy Structure of STEI



COMPONENT	PRINCIPLE	STRATEGY
Delivering Instruction	Present Instruction	Review Prior Skills or Lessons Gain Students' Attention Present Instructional Goals and Importance Make Lessons Relevant Maintain Attention Provide Organized Lessons Pace Instruction Interact Positively with Students Monitor Performance During Practice Provide Clear Directions Check Student Understanding
	Teach Thinking Skills	Model Thinking Skills Teach Fact-finding Skills Teach Divergent Thinking Teach Learning Strategies Teach Students to Monitor their Thinking
	Motivate Students	Show Enthusiasm and Interest Help Students Understand Importance of School work Use Extrinsic Rewards Effectively Account for Level and Student Interest Help Students Believe they Can Do their Work
	Provide Feedback	Give Immediate, Frequent, Explicit Feedback Provide Task-specific Praise and Encouragement Use Reexplanation to Improve Performance Model Correct Performance Provide Prompts and Cues
	Provide Relevant Practice	Develop Automaticity Provide Sufficient Opportunity for Practice Use Seatwork Effectively Provide Students with Help Use Relevant Tasks and Varied Materials Assign the Right Amount of Work Vary Methods During Practice

FIGURE 3c

Diagram of Component-Principle-Strategy Structure of STEI



COMPONENT	PRINCIPLE	STRATEGY
Delivering Instruction (cont'd)	Keep Students Actively Involved	Review Prior Skills or Lessons Select Appropriate Amounts of Content Select Appropriate Pace Monitor Performance Regularly Use Peers to Improve Instruction Provide Ample Opportunities for Success Provide Opportunities to Fail Monitor Engagement Rates
	Modify Instruction	Modify Lessons to Meet Student Needs Provide Additional Information Adjust Pace
Evaluating Instruction	Monitor Student Understanding	Check Understanding of Directions Check Process Understanding Monitor Success Rate
	Monitor Engaged Time	Check Student Participation Teach Students to Monitor their Own Participation Scan the Classroom and Count Engaged Students
	Monitor Student Activity	Teach Students to Chart their Own Progress
	Maintain Records of Student Progress	Inform Students Regularly and Frequently Correct Errors Quickly Maintain Records of Student Performance Use Task-specific Praise Have Students Correct their Mistakes
	Use Data to Make Decisions	Use Data on Pupil Progress to Decide When to Refer Use Pupil Progress to Make Teaching Changes Use Pupil Progress to Discontinue Service

FIGURE 4

Example Illustrating Organizational Structure of STEI

Effective Teaching Component:	**Delivering Instruction**
Teaching Principle:	**Providing Relevant Practice**
Teaching Strategy:	**Provide Students with Help** A goal of independent practice is high rates of accurate responding. Effective teachers want to avoid having students practice errors when engaged in independent practice. They should provide feedback during independent work sessions.
Teaching Tactic:	**Use Signals to Request Help** Develop a signal for each student to use when assistance is needed during an independent practice session. Circulate through the room when students are practicing and look for signs that someone needs help. Provide help as quickly as possible so that students can continue to work.

WHAT IS STEI DESIGNED TO DO?

Grounded in the findings of educational research, STEI identifies and helps you apply the strategies and tactics used by effective teachers. STEI is a flexible instructional improvement tool that can be used in several different ways.

Individual Student Interventions

STEI is primarily designed to help the teacher plan interventions for individual students. The system gives teachers ideas on how to accomplish specific objectives and effective instruction. It provides tips and tactics to use in planning instruction, managing instruction, delivering instruction, and evaluating instruction. An Effective Teaching Plan (Figure 5) is provided to help you organize your instructional improvement efforts. Space is provided for noting specific strategies and tactics that you have tried and for your evaluative comments and notes. As you try tactics, complete the chart as a record of your instructional improvement plans and their effectiveness.

Individualized Education Programs

STEI also is useful in writing Individualized Education Programs (IEPs) for students with disabilities. Educators are required by law to develop and have on file an individualized program containing a statement of instructional goals and methods for achieving those goals for all students with disabilities. STEI is useful in helping teachers and other professionals generate the strategies and tactics that will be used to meet students' special needs.

FIGURE 5

Effective Teaching Plan

COMPONENT/ PRINCIPLE	STRATEGY	TACTIC	EVALUATION/ PROGRESS

Instructional Consultation

STEI strategies are useful in instructional consultation. Instructional consultants are charged with the task of identifying students' instructional strengths and weaknesses, and designing interventions to teach to those strengths or weaknesses. It is virtually impossible for a consultant to be mindful of the myriad of strategies and tactics that promote effective instruction. STEI is a useful organization of the instructional enterprise, and includes a large number of tactics representative of those that could be used to achieve goals related to four key components in effective instruction.

Prereferral Intervention

Many states require that teachers engage in prereferral intervention before they formally assess students. The prereferral intervention process consists of systematic alteration of instruction and careful evaluation of the effects of instructional modifications on student learning. Teachers may vary instructional approaches, pacing, or feedback procedures, or other factors to help students accomplish instructional goals. STEI gives school personnel a catalog of alternative tactics to use in prereferral intervention.

Teacher Training Tool

STEI is useful in teacher training. The empirically demonstrated principles of effective instruction have been systematically organized to give teachers a way to think about instruction and a systematic approach to use. Those who train teachers will find STEI useful in training teachers in how to proceed and in giving them concrete suggestions of tactics to use in instruction.

Teacher Assistance Teams

Many schools now use Teacher Assistance Teams, Intervention Assistance Teams, or Problem Solving Teams. These are groups composed of regular classroom teachers and/or related services personnel, whose job it is to help teachers solve instructional problems, usually with individual students who experience difficulty. STEI is especially useful in reviewing with teachers those strategies and tactics they have already used, and in identifying additional tactics to try.

AT WHAT LEVELS CAN STEI BE USED?

STEI has been designed for use at three different levels.

Individual Student

STEI is most useful at the level of the individual student. Teachers and related services personnel charged with developing interventions can use the system as a springboard for instructional ideas. Often we know what we want to do, but lack concrete ideas on strategies or tactics to accomplish our goals and objectives.

Classroom

STEI also is useful at the classroom level. Teachers often know what they want to accomplish instructionally with a class, but run short of ideas on planning, managing, delivering, or evaluating instruction. STEI is a resource guide of tactics on how to teach effectively.

Building or District

STEI also can be used at the school building or school system level. Schools or districts engaged in or entering into site-based management can use this system as a resource bank and in planning inservice training. STEI contains strategies and tactics necessary to promote effective instruction.

HOW IS STEI USED?

STEI may be used either informally or formally. You may want to informally browse through the system to identify strategies and tactics that may fit your particular instructional needs. To facilitate this, connected text has been kept to a minimum in an attempt to provide kernels of knowledge that can be applied to improve teaching. We elected this format because we have been disappointed with many more traditional methods books in which good ideas are buried in prose.

Yet it is important that the informal user recognize that the system is not a cookbook; it is not a place one turns to identify the precise ingredients to plug into a program or the one way to "do it right." Rather, it is a resource, an idea bank that provides many options from which school personnel can select to best meet their local needs.

STEI is a big book with lots of tactics. You probably have already figured out that it is impossible to work on all the principles or strategies at once. Instead, users should decide which principles are most relevant to their needs and work on them first.

Identifying the most pressing issues involves selecting a component of instruction (i.e., planning, managing, delivering, or evaluating) and working on the principles within it. This decision can be made on the basis of the results of formal evaluations conducted within the school or on informal bases (e.g., personal interest in improving management). By working on one component and selected principles within it, the task of improving instruction becomes more manageable. If you choose a formal approach, there are several ways to enter the system.

Traditional Norm-referenced Assessment

Traditional norm-referenced tests (such as intelligence tests or achievement tests) may be useful in making decisions about **what** to teach; however,they are of limited use in making decisions about **how** to teach. When norm-referenced tests are used, the teacher gains information about those areas a student has mastered and those that need further instruction. In the Planning Instruction Component, we illustrate how norm-referenced tests can be used in planning to provide information on a student's subject matter mastery.

STEI is useful in making decisions about **how** to teach and in providing the teacher with specific tactics to use in instructional interventions. The strategies and tactics suggested for the component Delivering Instruction are designed for use regardless of the subject matter being taught.

Curriculum-based Assessment or Curriculum-based Measurement

Curriculum-based Assessment (Tucker, 1987) provides professionals with an analysis of specific skills a student has mastered. *Curriculum-Based Measurement* (Fuchs & Deno, 1991) provides professionals with data on general educational outcomes. Either approach tells the educator which skills are present and which are in need of further development. STEI can be used to derive specific methods (or tactics) to use to teach the skills.

Assessment of Instructional Environments

One instrument sometimes used to pinpoint specific instructional strengths and weaknesses is *The Instructional Environment Scale* (TIES) (Ysseldyke & Christenson, I987). The following is a summary paragraph from a recent report of a TIES administration.

> *"Overall, there seems to be a fairly good fit between Tamika's need and the instructional environment in Mr. D.'s classroom. Tamika seems to know what is expected of her in class, especially when*

> *Mr. D. gives her direct feedback and modifies assignments that are not clearly understood."*
>
> *There were two areas of strength in this instructional environment. First, the classroom environment seemed to be quite good for Tamika. Mr. D. has clear, well-understood classroom rules, time seems to be used productively, and the classroom climate seems well suited to Tamika's needs. Second, Mr. D.'s use of adaptive instruction seemed to help Tamika experience a greater amount of success in the task. Furthermore, Mr. D. seemed very willing to adapt his teaching methods to the needs of his students.*
>
> *Conversely, two areas that could be improved include a stronger cognitive emphasis and checking for student understanding. To facilitate a cognitive emphasis in instruction perhaps Mr. D. could more explicitly stress thinking skills used to complete math assignments. This could also include having Tamika explain the assignment, giving Mr. D. an opportunity to learn the cognitive strategies she uses.*
>
> *To improve student understanding of tasks, perhaps the task could begin with pairs completing a "trial run" sequence where all pairs follow Mr. D.'s directions to increase the amount of successful practice. Then, once students understood the task, they could be allowed to practice in independent pairs. This would free Mr. D. to move about the room and spot-check progress of individual pairs.*

What do we know about what instruction should look like for Tamika? We are told that an effort should be made to improve "student understanding of tasks." A suggestion is given on how this might be done. Examples of specific tactics that might be used are included in the section on the importance of monitoring student understanding in the Evaluating Instruction Component of STEI. A teacher could use this information to identify tactics that might be used to check understanding of directions, check process understanding, and monitor success rate.

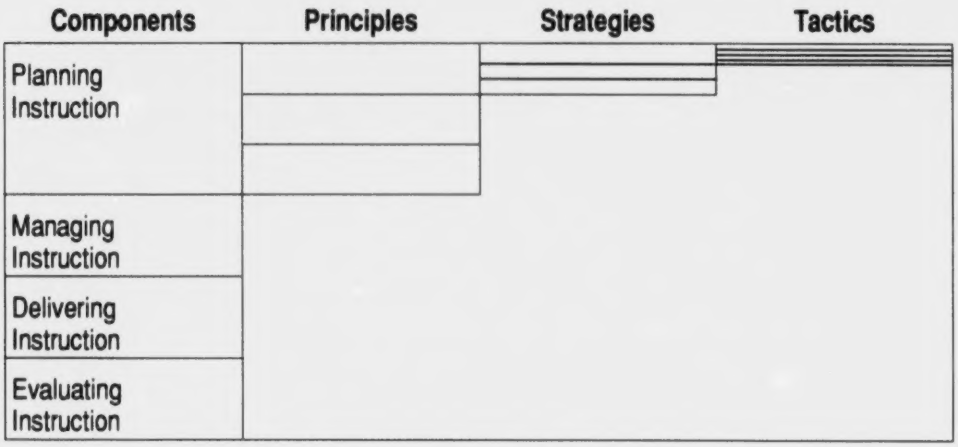
We also learn that Mr. D. should "more explicitly stress thinking skills used to teach math assignments." Examples of strategies and tactics for teaching thinking skills are illustrated in the Delivering Instruction Component of STEI.

Summary

Effective teaching is a complex process. Research has shown that effective teachers plan, manage, deliver, and evaluate instruction differently than their less effective peers. *Strategies and Tactics for Effective Instruction* is based on the components and principles that guide the efforts of effective teachers. A ***component*** *is* a main part of the process of effective teaching; for example, research has shown that effective teachers plan their instruction. Planning instruction is a ***component*** of effective instruction. A ***principle*** *is* a fundamental teaching activity on which more specific strategies and tactics are based. For example, these principles are related to planning instruction: deciding what to teach, deciding how to teach, or communicating realistic expections. They are the basis for more specific strategies and tactics. Strategies and Tactics for Effective Instruction is a compendium of strategies and specific tactics for use in improving classroom teaching. A ***strategy*** *is* a plan or action for use in implementing effective teaching principles. For example, to effectively decide what to teach, teachers must assess skill development, analyze instructional curricula or tasks, establish a logical sequence for instruction, and identify the demands of instructional tasks. Strategies are the steps that should be taken; they are the ***what*** rather than the ***how*** of effective teaching. A ***tactic*** is a specific instruction on how to teach. It is the lowest level that a component can be broken into for training and implementation purposes; it is a specific behavior or teaching activity. Relations between components, principles, strategies, and tactics of effective instruction are illustrated below (Figure 6).

FIGURE 6

Four Components of Effective Teaching



Planning Instruction

If all students in a class were at the same instructional level and if schools had clearly prescribed goals that were the same for all students, then instruction would consist simply of doing the same things with all students in the right order and at the right time. Therefore, the goals and objectives of schooling are not the same for all students. This is why instructional planning is such an important part of teaching.

Effective instruction requires planning. Instructional planning means making decisions—about what content to present, what materials or activities to use, how to present information, and how to determine whether students are learning the presented material. In deciding what to teach and how to teach it, teachers set goals and expectations for their students. There are three components of instructional planning:

- deciding what to teach;
- deciding how to teach; and
- communicating realistic expectations to students.

These three components are fleshed out in this unit. For each component we describe a number of basic principles, and for each principle we specify activities that may be used.

Systematic instructional planning includes two functions: diagnosis and prescription. Instructional diagnosis involves accurate assessment of student characteristics (e.g., skill level, motivation), task characteristics (e.g., sequence, cognitive demands), and classroom characteristics (e.g., instructional groupings, materials).

Instruction must also be prescribed. It is important that teachers match instruction to the instructional needs of individuals and groups. This involves matching content to learners' levels of skill development, making certain that the approaches used are ones that motivate individual students, and taking into account the extent to which students have necessary prerequisite skills before teaching more difficult or more complex skills. In addition, teachers must communicate realistic expectations to students. Doing so involves **getting** students to be active and involved learners, **getting** them to understand the consequences of failure, communicating goals, objectives, and standards, and **getting** students to use classroom time effectively.

In making decisions about the degree of appropriateness of content for individual students, teachers must consider the success rate they want the student to experience and the amount of content they want to cover in a given period of time.

COMPONENT	PRINCIPLE	STRATEGY
Planning Instruction	Decide What to Teach	Assess Skill Development Analyze Instructional Curricula or Tasks Establish Logical Sequences of Instruction Identify Demands of Classroom Tasks Consider Contextual Variables Identify Gaps Between Performance levels
	Decide How to Teach	Establish Appropriate Goals and Objectives Put Goals and Objectives in Priority Establish Performance Standards Choose Instructional Methods and Materials Establish Grouping Structures Pace Instruction Appropriately Cover Adequate Content Set Success Rate Standards Use Performance to Plan Instruction
	Communicate Realistic Expectations	Teach Students to be Active Involved Learners Teach Students Consequences of Success and Failure Communicate Goals, Objectives, and Standards Teach Students to use Classroom Time Effectively

PLANNING: Table of Contents

PRINCIPLE: Decide What to Teach . . . 19
- Assess Skill Development . . . 20
- Analyze Instructional Curricula or Tasks . . . 24
- Establish Logical Sequence of Instruction . . . 26
- Identify Demands of Classroom Tasks . . . 27
- Consider Contextual Variables . . . 28
- Identify Gaps Between Performance Levels . . . 30

PRINCIPLE: Decide How to Teach . . . 33
- Establish Appropriate Goals and Objectives . . . 34
- Put Goals and Objectives in Priority . . . 35
- Establish Performance Standards . . . 36
- Choose Instructional Methods and Materials . . . 37
- Establish Grouping Structures . . . 38
- Pace Instruction Appropriately . . . 39
- Cover Adequate Content . . . 40
- Set Success Rate Standards . . . 41
- Use Performance to Plan Instruction . . . 42

PRINCIPLE: Communicate Realistic Expectations . . . 45
- Teach Students to be Active, Involved Learners . . . 46
- Teach Students Consequences of Success and Failure . . . 47
- Communicate Goals, Objectives, and Standards . . . 48
- Teach Students to use Class Time Effectively . . . 49

PRINCIPLE
Decide What to Teach

A fundamental part of instructional planning involves deciding what to teach. Teachers make "what" decisions both for entire classrooms and for individual students. Sometimes curricular decisions are made centrally in school districts, and teachers are required to adhere to district-mandated instructional content and sequences. In other cases, teachers are given the flexibility to select curricular objectives and materials. It is especially important that teachers be given flexibility and be flexible in instructional planning, for there are wide individual differences in any classroom. Instruction of students who are disabled involves differentiation of content and, as we will see in the next section, differentiation of method of instruction.

There are six strategies involved in deciding what to teach. First, teachers assess the student's current level of skill development. They analyze carefully the entry skills a student has for performing the tasks they assign, and the extent to which the student has the prerequisites necessary for performing classroom work. Second, teachers carefully consider the content of instruction. Often this takes the form of task analysis, breaking complex skills down into subskills and assessment of the extent to which the student demonstrates the subskills. Third, teachers must decide the sequence in which they will teach content. Fourth, they must take into account the kinds of demands posed by classroom tasks. Fifth, they must consider contextual variables (such as instructional groupings in the classroom, how the student interacts with other students' availability of materials) that have a direct influence on what is taught and what can be taught. Finally, teachers plan instruction in such a way as to move a student from where he/she is to where the teacher wants him or her to be. This involves systematic analysis of desired and actual performance.

STRATEGY: **Assess Skill Development**

Instructional outcomes are enhanced when instruction is at appropriate levels; students experience difficulty when instruction is not matched to their levels of development. Teachers who know which skills students do and do not have in specific content areas teach more effectively and adjust instruction to meet specific needs.

TACTIC Use norm-referenced tests effectively

Elem/Sec

Administer brief norm-referenced measures of skill development in basic skill areas. Knowledge about how students perform on standardized tests will tell you what students know in broad content areas (science, social studies, mathematics). Most group administered norm-referenced achievement tests take very long to give (2 to 5 hours). You might better use a brief individually administered test—the *Peabody Individual Achievement Test* (Markwardt, 1989), *Diagnostic Achievement Battery-2* (Newcomer & Curtis, 1990), or *Basic Achievement Skills Individual Screener* (Sonnenschein, 1983). When administering standardized tests to children, teachers must take a number of factors into consideration.

- If group tests are administered, the smaller the group the better.
- If large groups are tested, additional adults (parent volunteers, paraprofessionals) should be present.
- When students who are disabled are tested, group size should not exceed five.
- Examiners must at all times administer tests exactly according to directions. Departure from standardized procedures destroys the meaning of test scores by rendering the norms useless.
- Length of sitting should vary with the age of test-takers and the extent of any disabilities. As a general rule, a testing session should not exceed 30 minutes in the primary grades, 40 to 50 minutes in intermediate grades, and 90 minutes in junior and senior high school.
- Tests should be administered in settings in which there are few distractions.
- It is very important that you spend extensive time studying the manual before administering a test. Examiners must be familiar with the tests they administer.

STRATEGY: **Assess Skill Development**

TACTIC Use curriculum-based measures to determine skills

Elem/Sec

Curriculum-based measures are those that directly assess student progress in the content of the curriculum. The tests are used to measure mastery of content; knowledge of the extent to which students have mastered the content of the curriculum is useful in planning instruction. Effective teachers administer curriculum-based measures of skill development in basic skill areas to decide what to teach their students. Many curriculum-based measures are teacher constructed. The teacher makes a detailed list of the skills he/she wants students to have at the conclusion of instruction, and develops samples from this large skill domain. These samples are administered frequently during the year, and the teacher keeps track of student progress by recording (and sometimes graphing) the results of pupil performance on the tests. There are many commercially-available curriculum-based achievement tests, such as the Hudson Education Skills Inventory (Hudson, Colson, Welch, Banikowski, & Mehring, 1989) and Monitoring Basic Skills Progress (Fuchs, Hamlett, & Fuchs, 1991). Knowledge of pupil performance on curriculum-based measures is especially helpful in spotting gaps in skill development and designing remedial interventions to overcome them. Procedures for conducting curriculum-based assessment in different content areas are described in *Curriculum-based assessment: Testing what is taught* (Salva & Hughes, 1990).

TACTIC Assess reading informally

Elem

Informal, direct, and frequent reading assessment means weekly or biweekly assessment of students' performance on specific strategies while they are reading connected text. The benefit of this approach is that assessment is completed in natural passages with which the student is familiar, rather than unconnected text or in unnatural short passages. Informal direct, frequent assessment has high content validity and is instructionally relevant. Informal assessment affords the teacher information on the extent to which students are able to apply what they learn in their daily lessons

Informal measures should be direct. They should be designed to assess precisely what students need to learn or have been learning when reading. The best way to select passages for students to read is to have them.

(1) read the work you are assigning on a daily basis, or

(2) read the work you expect them to read over the next week or two.

Informal measures should be given frequently. Data should be collected at least several times for initial assessment and at least once per week after instruction has begun.

STRATEGY: **Assess Skill Development**

TACTIC Administer an informal reading inventory

Elem

Informal reading inventories (IRI's) are collections of short reading passages written at different reading levels. "Usually, there are at least two passages at each reading level, pre-primer through sixth grade, one of which is to be read orally by a student and one to be read silently. A student reads passages of increasing difficulty until a frustration level is reached. Frustration level is that level at which a student has to struggle considerably with word recognition or comprehension. Based on the student's word recognition accuracy and comprehension accuracy at various reading levels, an instructional reading level is determined." (Taylor, Harris, & Pearson, 1988, p. 117). Taylor, Harris, and Pearson's textbook, entitled, *Reading Difficulties: Instruction and Assessment*, includes an excellent chapter (Chapter 13) on administration, scoring, and interpretation of informal reading inventories.

TACTIC Use unit mastery tests effectively

Elem

Most basal reading and mathematics series now include unit mastery tests. As their name implies, these are measures of the extent to which students have mastered the content taught in specific instructional units. Teachers may use the information derived from these tests to make judgments about the appropriate level at which to begin instruction. For guidelines for evaluating and making best use of tests in basal programs, see tests in Basal Reading Programs in *A guide to Selecting Basal Reading Programs* (Center for the Study of Reading, 1990).

TACTIC Pretest skills you intend to teach

Elem/Sec

Assess the extent to which students have the component skills necessary to perform a more complex skill. Pretesting can be completed with formal norm-referenced measures, but it is usually more effective to use informal curriculum-based measures, or to administer unit mastery tests as pretests.

TACTIC Sample skills in regular materials

Elem/Sec

Sample students' performance by asking them to read aloud from their books, spell the words on their spelling lists, or do the kinds of math problems that are in their math texts.

TACTIC Conduct environmental inventories

Sec

This is done by gathering data on the kinds of skills individual students need in order to be successful in their specific environment. The activity is especially useful with older students and with those who evidence profound handicaps. Effective teachers interview employers, parents, and others in students' "outside" environments; they observe what students do when they are not in school.

STRATEGY: **Assess Skill Development**

TACTIC Use portfolio assessment

Sec

Portfolios consist of collections of students' work over relatively long periods of time. Students complete tasks and keep them in a folder. The teacher evaluates the students' work by looking at progress over time and at the quality of work done. This tactic is especially useful at the secondary level, and especially in subjects in which there is much writing to be done. When used with older students it is a good idea to have students select from their portfolios work that represents their performance and the beginning and end of an instructional unit. Then the teacher evaluates student progress by comparing the work.

For strategies for using portfolio assessment, see Tierney, Carter, & Desai (1991).

STRATEGY: **Analyze Instructional Curricula or Tasks**

Most of the skills students learn in school are complex combinations of subskills. Before planning instructional units, effective teachers identify the specific subskills necessary for performance of complex skills or behaviors and assess the extent to which the student has those skills.

TACTIC Use task analysis to teach complex skills

Elem/Sec

Task analysis is the process of breaking down a complex skill into its component parts. Teachers who want to teach complex skills break these skills down into subparts, and assess the extent to which the student has the necessary subparts (or prerequisite skills) to perform the complex behavior. Once skill development deficiencies are identified, the skills are taught. They are then integrated to teach the complex behavior.

TACTIC List steps students must go through to complete task

Elem/Sec

Break down complex skills into component skills and develop a list of the things students must be able to do to perform the complex skill.

TACTIC Pull task analyses from teachers' manuals

Elem/Sec

Consult the teachers' manual for the curriculum used with the student of concern. Often you will find a step-by-step breakdown of the skills that must be taught or mastered to complete tasks. Use the approach and sequence suggested by the author of the curriculum.

TACTIC Ask successful students how they complete the task

Elem/Sec

Novices and experts may both succeed at tasks, but complete the tasks in different ways. You can learn much about how successful students complete a task by asking them to illustrate how they did so. This may enable you to see alternative ways of analyzing a task.

TACTIC Look at existing sequences for similar tasks

Elem/Sec

As you attempt to break a complex task down into component parts, look in the curriculum at ways in which similar tasks are broken down. You may be able to use the strategy employed in similar tasks in analyzing this particular task. You don't always have to look for new and different ways to break down a task.

TACTIC Assess the importance of what you teach

Elem/Sec

Before you spend lots of time task analyzing specific skills, ask yourself, "Is this important enough to teach?" You may be able to omit extraneous material from the curriculum. Engaging in this exercise will help you assess the importance of what you teach.

STRATEGY: **Analyze Instructional Curricula or Tasks**

TACTIC Teach short-term goals

Elem/Sec Consider what you can teach that is short of the terminal, or final, objective.

TACTIC Examine what you are teaching

Elem/Sec Ask yourself whether what you are teaching is an intermediate step, or if it can be taken to fluency/mastery.

TACTIC Get input from other teachers

Elem/Sec As you analyze instructional curricula ask sending (lower grade) and receiving (upper grade) teachers for input. This will help you put objectives in priority, set performance standards, and task analyze curricula.

STRATEGY: **Establish Logical Sequence of Instruction**

Complex skills are learned by teaching subskills in a sequence, but there is nearly always more than one way to learn a skill. Specific methods to be used should be determined by assessing the extent to which a given plan is being used and the student is profiting from instruction employing that plan.

TACTIC Identify alternatives for teaching a skill

Elem/Sec

There are many ways to teach specific skills. Your creativity as a teacher comes into play when you identify alternative ways to teach a skill. Sometimes it is easy to do so, and many alternative ways to teach are apparent. For example, there are many activities in which you could engage to teach students to count to 10. For other skills, especially complex skills, the steps one goes through to learn the skill are not apparent. Thus, it is tough to identify an algorithm and a sequence to instruction. In fact, you may be the first to identify a new, different way to teach a skill.

TACTIC Teach skills early that are critical to acquisition of other skills

Elem/Sec

Some skills are critical to learning of other skills. Teach these skills early in the instructional sequence.

TACTIC Ask for assistance from other teachers

Elem/Sec

As you attempt to establish a logical sequence to instruction, consult with other teachers to learn the kinds of sequences they have found effective in teaching the skill.

STRATEGY: **Identify Demands of Classroom Tasks**

Instructional tasks put different kinds of learning demands on students. Effective teachers identify the extent to which different kinds of learning are involved in instruction, and develop their instructional plans accordingly.

TACTIC Review demands of an instructional task

Elem/Sec

There are five kinds of learning in which students must engage to make progress in school: discrimination learning, factual learning, rule learning, conceptual learning, and procedural learning. Discrimination learning involves finding differences among letters, numbers, or concepts. Factual learning usually involves the rote learning of specific facts. Students learn specific rules that guide their learning of reading, math, or appropriate classroom behaviors. Some learning involves the learning of concepts, like the concept of precipitation, or the concept of confidentiality. Finally, in some instances the content of instruction involves learning procedures, like how to decide where to put decimals in math problems, or how to find the capital on a state map. As you plan instruction, take into account the extent to which the student is being required to engage in these five kinds of learning.

STRATEGY: **Consider Contextual Variables**

Learning and instruction do not occur in vacuums. Student population, classroom size, noise, interruptions (PA announcements), class size, the "fit" of the furniture to the students, and availability of materials must be taken into account when planning lessons. But, do not simply teach something because materials exist to teach it.

TACTIC Use grouping arrangements effectively

Elem/Sec

Students sometimes are taught individually, and sometimes as part of a group. Students may get along well with other members of their instructional group, or there may be certain pairs of students who do not get along with one another. In planning instruction, teachers must consider instructional grouping arrangements. Students may also need to be taught to work with students they don't like or who are different from them.

TACTIC Use a sociometric scale to identify friendships

Elem/Sec

Sociometric scales are scales in which students respond to questions about other students. Questions are like, "Who would you invite to go on a picnic with you?" Such a scale may be useful in identifying friendship patterns and in making decisions about grouping arrangements.

TACTIC Assign students to desks that fit them physically

Elem/Sec

It is beneficial to have available in any classroom a variety of sizes of furniture, including desks and tables. In assigning students to desks, it is best if the teacher makes sure the desk fits the student.

TACTIC Consider group size and structure

Elem/Sec

Some kinds of instruction are best taught in large groups, others in small groups. Consider the stage you are at in teaching something (acquisition, review) and establish group size and structure on the basis of this. When students are acquiring skills it is helpful to have them organized in small groups. Individuals can be given specific attention, and acquisition can be monitored.

For discussion of recommended procedures for grouping for basal reading instruction, see the chapter by Shake in *Improving basal reading instruction* by Winogrod, Wixson, & Lipson (Eds.) (1991).

STRATEGY: **Consider Contextual Variables**

TACTIC Group students who have similar skills

Elem/Sec

Student skills in any classroom differ considerably for any particular task. In your class, for example, the students have different kinds of skills in oral reading. Specific tasks differ in the instructional demands they place on students. Build a grid or matrix on which you rank students in terms of the levels of competency those students demonstrate. Rank tasks in terms of the kinds of skills demanded. Group students who have comparable skills and instruct them at different levels. Figure 7 illustrates a grid. Ten students are ranked in terms of the skills they evidence. Oral reading is broken down (crudely in this case) along the horizontal axis. You would group Ken, Shane, Phyllis, and Trish together for instruction in basic decoding and word analysis; Phi, Mary, and Maria for drill in word recognition; and Matthew, Giselle, and Hank for practice in comprehension.

FIGURE 7

Demonstrated Competence

	Decoding & Word Analysis	Word Recognition	Comprehension
Matthew	X	X	
Giselle	X	X	
Hank	X	X	
Phil	X		
Mary	X		
Maria	X		
Ken			
Shane			
Phyllis			
Trish			

STRATEGY: **Identify Gaps Between Performance Levels**

Effective instruction moves students from current levels of performance to desired levels based on age and grade expectations. Effective teachers identify discrepancies between where student are and where they want them to be (their goals or objectives) and they plan instruction to move the student toward desired outcomes.

Tactic Assess current level of skill development

Elem/Sec

To identify discrepancies you must assess the current level of skill development.

Tests are used to measure mastery of content, and knowledge of the extent to which students have mastered the content of the curriculum is useful in planning instruction. Effective teachers administer norm-referenced and curriculum-based measures to decide current levels of skill development. They also assess skills informally.

Administer norm-referenced measures of skill development in basic skill areas. Knowledge about how students perform on standardized tests will tell you what students know in broad content areas (science, social studies, mathematics).

Curriculum-based measures are those that directly assess student progress in the content of the curriculum. Informal, direct, and frequent informal assessment means weekly or biweekly assessment of students' performance on specific skills while they are performing tasks in school. The benefit of this approach is that assessment is completed in natural settings and in materials with which the student is familiar. Informal measures should be direct and given frequently. Data should be collected at least several times for initial assessment and at least once per week after instruction has begun. For directions on assessing academic skills using curriculum-based assessment, see Shapiro (1989).

TACTIC State what you expect students to accomplish

Elem/Sec

Decide what you want to see as outcomes of your instruction. Provide each student with a statement of these instructional goals. Discuss the goals with each student and make modifications as appropriate based on this interaction. Periodically restate your instructional goals and have students list them as part of their weekly assignments.

TACTIC Make a list of performance discrepancies

Elem/Sec

Compile lists of discrepancies between student performance levels and expected instructional goals. Identify necessary instructional changes to reduce the discrepancies.

PLANNING INSTRUCTION: Decide What to Teach*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

PRINCIPLE

Decide How to Teach

There is one fundamental myth that most teachers are taught in their teacher preparation programs. It is the belief that the way to decide how to teach individual students is to give them a test. Teachers are told that they simply must identify specific learner strengths and weaknesses (using a test), and then remediate or compensate for weaknesses. There is little research support for this contention.

The best way to decide how to teach is to teach. Teaching is an experimental process: Effective teachers try alternative methods and materials until they find an approach or combination of approaches that works best in moving students toward accomplishment of instructional goals. In making decisions about how to teach, effective teachers make an "educated guess" about the kinds of instructional activities that will work, then try them and monitor the results. The educated guess is based on experience, either with a particular student or with others like that student. Each year, often as a result of being successful with previous students, teachers are better able to plan instruction.

Deciding what to teach is a form of diagnosis; deciding how to teach is a prescription or treatment. If the treatment is not appropriate to the individual's needs, it actually can produce educational problems.

Effective teachers use the following strategies in making decisions about how to teach; they establish and put in priority order appropriate goals and objectives, establish instructional sequences and performance standards, choose instructional methods and materials, establish grouping structures, pace instruction appropriately, match methods and types of instruction, ensure that adequate content is covered, set success rate standards and appropriate ratios of known to unknown material and student performance to plan instruction.

STRATEGY: **Establish Appropriate Goals and Objectives**

Specifying the skills or behaviors students are to exhibit or knowledge they will give as evidence of having acquired those skills is prerequisite to instruction. Effective instructional objectives are those that specify what students will do, conditions under which it will be done, and criteria that will be used to judge performance.

TACTIC Write specific behavioral objectives

Elem/Sec

Write instructional objectives that specify what students should be able to do and what they will do if given an opportunity. An objective is a desired outcome of some activity. Some objectives are short range, others are long range. Stay away from stating objectives like "the student will appreciate" or "the student will know . . .." Specify the things the student will do.

TACTIC Specify the observable behaviors students will exhibit

Elem/Sec

When you state instructional objectives, make sure that you can observe what the student does. For example, you might state, "On completion of the unit on addition, the student will add single digit numbers and write the sums on paper with X% accuracy."

TACTIC Specify standards for success in measurable ways

Elem/Sec

To know whether an objective has been met, you will have to measure the extent to which the required behaviors have been demonstrated. Specify criteria in measurable ways. For example, "On completion of the unit on addition, the student will demonstrate mastery of addition facts by solving correctly 18 of 20 math problems requiring addition of single digits."

TACTIC Keep new content at a minimum

Elem/Sec

When you write goals and objectives and when you select instructional content, arrange instruction in such a way that lessons contain 75% known and 25% unknown material.

STRATEGY: **Put Goals and Objectives in Priority**

Teachers must decide the order in which they expect students to accomplish instructional goals. To a large part this is dependent on the hierarchical arrangement of instructional content; scope and sequence of many academic areas are provided in teachers' editions of textbooks.

Tactic **Use scope and sequence outlined in teacher's manual**

Elem/Sec

Most teachers' manuals include a description of the scope and sequence for the content taught in specific curricula. Refer to the description in the teacher's manual in deciding how to sequence instruction, but you should not simply accept the sequence as outlined in the manual. You should make your own decisions based on the kinds of students you are teaching, their instructional needs, and their level of skill development.

Tactic **Modify instruction for students who are exceptional**

Elem/Sec

Students who are exceptional often demonstrate splinter skills. That is, they have knowledge of some advanced skills, but gaps in lower level skills. In planning instruction consider the extent to which you may omit parts of the scope and sequence. Consider also the extent to which it is necessary to cover all skills simply to ensure that there are not gaps in development.

Tactic **Combine related tasks**

Elem/Sec

There is a tendency among developers of instructional materials to slice tasks into smaller and smaller pieces. Try not to do so, but try combining smaller, related tasks.

Tactic **Consider what is needed and essential**

Elem/Sec

Give top priority to teaching those skills that are necessary and essential to the performance of more complex skills. Teach essential skills before ones that are less important.

TACTIC **Consider what the student is ready to learn**

Elem/Sec

In establishing goals and objectives and making decisions about those that have priority, consider what the student already knows and is now ready to learn. Give top priority to teaching skills or content the student is ready to learn.

STRATEGY: **Establish Performance Standards**

Teachers must decide the level of mastery that they will accept for successful performance of tasks. Generally, different criterion levels are used during different phases of instruction. Lower levels are expected when learning new skills; higher levels are targeted when skills have been acquired and when mastery is the goal.

TACTIC Set mastery standards based on importance of material

Elem/Sec

When teaching for mastery of an instructional goal or objective, set specific standards for demonstration of mastery. Make judgments about the level of proficiency desired based on importance of the knowledge to later acquisition of a skill or concept. For example, a teacher may decide that knowledge of the capitols of the 50 states is not critical, so may require 75% to 80% mastery of the names of the capitols. That same teacher may decide that skill in discriminating red from green traffic lights is critical survival for a student who has a mental disability, and may set a mastery level of 100% for this skill.

Remember that if you do not learn a skill to fluency, you are unlikely to retain it. If a student does not learn to drive a stick shift automobile to fluency, it is unlikely the student will be able to do so five years from now without additional instruction or practice.

TACTIC Use a peer normative approach

Elem/Sec

You may want to establish performance standards by taking an average of the performance of several successful students.

TACTIC Decide the extent to which the skill underlies others

Elem/Sec

Instruction is sequential. The learning of many complex behaviors is dependent on the successful mastery of "lower level" skills. Decide whether the skills you are teaching are basic to mastery of later content. Require higher standards for mastery of material that is basic to learning subsequent (or more complex) content.

STRATEGY: **Choose Instructional Methods and Materials**

Once the teacher knows the content to be covered, the specific objectives of instruction for an individual child, and the learning outcomes that are desired, instructional methods or materials must be selected that will assist the teacher in meeting those goals for that child.

TACTIC Adjust methods and materials as appropriate

Elem/Sec

The task of selecting instructional methods and materials can become complicated when students are exceptional. These students may need special methods (sign language, acceleration), or they may need special instructional materials (tape-recorded lessons, advanced reading materials, high interest-low vocabulary reading books). You do not know ahead of time whether specific materials will work, but you make educated guesses. The data you collect on the progress students make toward accomplishing objectives will give you an idea of whether you have selected the right materials and activities. If students do not make progress, then one plausible explanation (among many) is that the materials are inappropriate.

TACTIC Do not select materials based on modality preference

Elem/Sec

It is commonplace for teachers to assume they must assess students' preferred learning style and assign tasks and materials that involve teaching through the preferred modality. There is little empirical support for this contention.

TACTIC Assess performance on the materials used

Elem/Sec

In making judgments about the kinds of materials that will be effective in helping students reach specific goals, it is necessary to engage in direct, frequent measurement of the progress that students are making. Use the data on the progress students make to decide whether the materials are effective.

TACTIC Build a compendium of instructional options

Elem/Sec

Over time, collect examples of alternative ways to teach the same concept. A couple of ways of doing this include collaborating with other teachers to teach a task and recording their ideas on how to teach the task, or watching other teachers teach a task and recording how they do so.

STRATEGY: **Establish Grouping Structures**

Effective teachers group students for instruction and take into account pupil characteristics, skill level, and the content of instruction in making decisions about how to group. They often use different grouping arrangements for different types of instruction (e.g., academic content, social content).

Tactic Group on the basis of needed instruction

Elem/Sec

Students may be grouped in such a way that all students who need the same lesson content are placed together, or you may try to come up with a compatible mixture of students; you might want to include in the group students who can serve as models for other students.

Tactic Group students for short time frames

Elem/Sec

You should vary your grouping arrangements. Keep students in groups for only short periods of time. The group structures may remain the same, but students can move in and out of the group, thereby varying the makup of the group.

Tactic Use guidelines for cooperative learning in setting groups

Elem/Sec

In assigning students to groups for cooperative learning activities, try to create groups composed of students whose skill levels range from low to average to high, so that the overall "ability" of each group is average. You can use a list rank-ordered by achievement in specific areas of instruction and assign team letters to students from each group (Figure 8). Check groups to ensure equivalent representation based on achievement and other sources of concern (e.g., gender, race).

FIGURE 8
Rank-order by Achievement in Specific Areas of Instruction

High Students			Average Students			Low Students		
1	Bob	A	7	Megg	F	13	Herb	A
2	Rob	B	8	Matt	E	14	James	B
3	Stu	C	9	Joan	D	15	Howie	C
4	Rex	D	10	Bart	C	16	Myata	D
5	Kate	E	11	Bret	B	17	Caleb	E
6	Ned	F	12	Jane	A	18	Garth	F

Tactic Use knowledge of skills to create mini-groups

Elem/Sec

Many teachers find pairing students with complementary skills to be very effective when assigning students to groups for research and writing projects. For example, a student with strong writing skills can be paired with someone who is good in artwork (e.g., map drawing) to create a balanced project team, much like what is done in industry or government. Some teachers also find it helpful to pair students with good comprehension skills with peers who are good at decoding but less proficient at understanding what they read.

STRATEGY: **Pace Instruction Appropriately**

Pacing refers to the rate at which students are expected to meet instructional objectives within a given scope and sequence of instruction. Optimal pacing is evidenced when the amount of content covered is maximized without frustrating the learner.

TACTIC Use active decision-making

Elem/Sec There are several considerations in making decisions about instructional pace. Teachers must take into account the amount of instructional content they want to accomplish within a year. They also must consider the level of skill development of the learner and the rate at which that student makes progress.

TACTIC Quit teaching when students demonstrate mastery

Elem/Sec Check often to see if students are mastering the content of instruction. When students demonstrate mastery, do not keep teaching the content. Move to new content.

TACTIC Check often for understanding

Elem/Sec Ask students frequently to tell you or show you what they are doing. If students do not understand what they are doing, consider slowing the pace.

TACTIC Check for boredom and frustration

Elem/Sec Students give nonverbal clues of the extent to which the pace of instruction is too rapid or too slow. Check to see if students appear bored or frustrated. Both are signs that pace is inappropriate. You must check further to see if the pace is too fast or too slow.

TACTIC Engage in normative peer comparisons

Elem/Sec Set progress expectations based on what you know about the individual student, as well as on the performance of "typical" others at his/her age or grade. Keep track of progress and students who are not advancing as expected.

STRATEGY: **Cover Adequate Content**

Teachers must decide how much content they are going to cover. These decisions are made on the basis of school district goals and objectives; goals and objectives unique to the class, setting, or school; and individual student characteristics.

TACTIC Set catch-up goals

Elem/Sec

Assess individual pupil skill levels. Then look at specific goals and objectives for the student. Ask yourself, "How much must be covered to catch the student up in the amount of time I have available to do so?" Then set performance objectives and performance standards that will enable you to develop predictions for amounts of content to be covered.

TACTIC Check with other teachers

Elem/Sec

A simple way to decide on the appropriateness of goals and accomplishments is to check rates and levels of performance for other teachers in the school. When evaluating amounts of content being covered, estimates from same-grade and other-grade (lower and higher) teachers can be very useful.

TACTIC Use history as basis for decision-making

Elem/Sec

Effective teachers keep records of levels and types of work covered during instructional units. Information from present and past classes can be very helpful in evaluating the appropriateness of current instruction.

TACTIC Use school records, but carefully

Elem/Sec

Information on specific types and amounts of content covered by individual students can be obtained from current and previous school records. While this information is readily available, most teachers use it cautiously because they are careful not to be biased by reports that can be inaccurate. Most effective teachers prefer actual student performance data as their record of current levels of functioning.

STRATEGY: **Set Success Rate Standards**

Decisions about mastery depend on how often skills will be used, importance of skills across settings, student preferences, and judgments about usefulness of skills. Effective teachers differentiate levels of success necessary for different instructional content. They expect different levels of performance on intermediate and final tasks.

TACTIC Conduct an environmental inventory

Sec

An environmental (or ecological) inventory is an appraisal of the kinds of skills individual students need to be successful in their specific environment. Use the data from conducting an environmental inventory to make decisions about the success standards you will set for specific teaching activities. Effective teachers set higher standards for mastery of activities that are judged to be or shown to be critical in the student's environment.

TACTIC Develop activities around different standards

Elem/Sec

Effective teachers plan instruction so that students will be successful at least 80% of the time. In some instances we want students to exhibit 100% mastery, while for other content we might be interested in 50% mastery. Judgments about standards are based on beliefs about importance of content or skills to later development.

TACTIC Set an appropriate ratio of known to unknown material

Elem/Sec

Most students need to experience success to maintain interest in work they do. Effective teachers plan instruction so that it includes 75% known material and 25% unknown material, because instruction that contains too much unknown material frustrates students.

STRATEGY: **Use Performance to Plan Instruction**

Effective teachers keep track of student progress and compare progress of individual students to that of others in their class or grade. They are able to use these data to decide (1) the extent to which instruction is working, and (2) whether or not it makes good sense to change what is being done.

TACTIC Use functional analysis to plan instruction

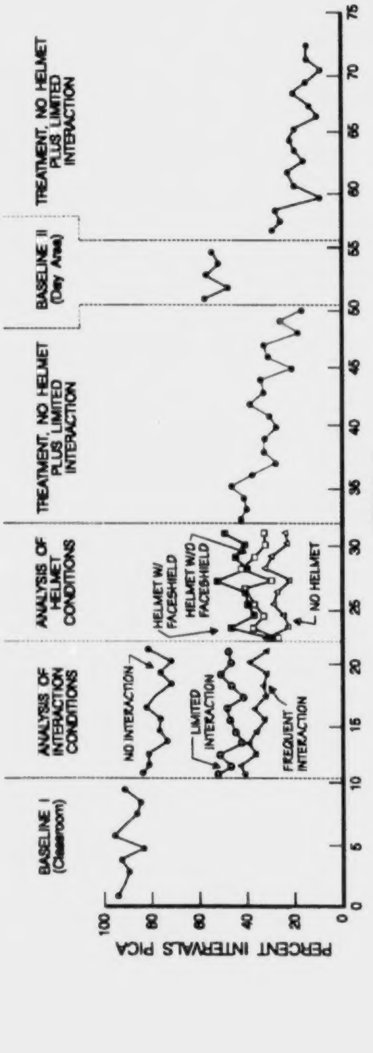
Elem/Sec

Functional analysis is a procedure used to determine empirically the relationships between variables in the environment and taget behaviors. The practice is used to identify variables that are controlling target behaviors and to plan ways to modify the behaviors. Shapiro (1989) listed the steps in functional analysis. The method begins with collection of data to identify potential variables that may be controlling a behavior. The teacher may interview the parents or caretakers, or ask the child to learn variables that may be influencing or controlling a behavior. Hypotheses are then generated about variables that may be controlling the behavior, and data are collected using an alternating treatment design. The information is used to keep track of interventions that work.

Figure 9 is taken from a study by Mace and Knight (1986). Staff interaction was used as a treatment for pica (eating inappropriate objects); a helmet and a face mask was also used to treat the same behavior. An analysis of the chart shows that limited interaction with no helmet produced the greatest reduction in problem behavior. (The figure is from Mace & Knight, *Journal of Applied Behavior Analysis*, 1986, *19*, page 415).

FIGURE 9

Treatment for Pica



PLANNING INSTRUCTION: Decide How to Teach*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

PRINCIPLE

Communicate Realistic Expectations

Effective teachers set realistic expectations for students and communicate those expectations to them. When teachers do not expect enough from their students, they shortchange them. When expectations are realistically high, students succeed; when they are unrealistically low, students fail. Effective teachers get students active and involved in learning. Those who are not actively involved cannot be expected to do well on measures of mastery. Another part of communicating realistic expectations is teaching students to understand the consequences of failure. Goals, objectives, standards, and expectations must be communicated clearly. Teachers must check for student understanding of what they communicate.

STRATEGY: **Teach Students to be Active, Involved Learners**

Students who are actively engaged in responding to instruction profit more than those who are not. Effective teachers develop and use techniques to get students active and to maintain their involvement.

TACTIC Vary questions asked in class

Elem/Sec

Change the stems you use in asking questions. Ask who, how, when, why, and what questions. Have students generate additional questions of different types.

TACTIC Call on students randomly

Elem/Sec

Students soon develop routines of attending and not attending in response to the routines teachers use in calling on students. If you call on students at random, then they will not be able to anticipate when their turn is coming up. They will need to attend in order to be ready to respond. Use caution when doing this, however, since some students have difficulty focusing their attention for long periods of time.

TACTIC Use peer-monitored learning activities

Elem/Sec

Many teachers find that some students respond better to peer-directed learning activities than to teacher-directed ones. They take advantage of this by having pairs of students work together on re-reading, proofreading, or writing assignments.

STRATEGY: **Teach Students Consequences of Success and Failure**

Effective teachers teach students that behavior has consequences. They present the positive and negative effects of what they are teaching and they illustrate the benefits of success and failure for their students.

TACTIC Use a mystery motivator to encourage success

Elem/Sec

Identify a reinforcer that is practical, inexpensive, and appropriate for an individual student or group. Rather than telling the student "If you do ________, you will receive ________, keep the reinforcer a secret. Write the name of the reinforcer on a piece of paper. Put the paper in an envelope with large question marks on the outside. Put the envelope in clear view of the student. Motivate the student by saying, "When you complete this task to a specified level of satisfaction, you will receive what is written down inside the envelope." Students typically will work very hard when such a mystery is involved.

TACTIC Use a contingency contracting system

Elem/Sec

Enter into a contract with the student. In the contract specify what the student will do, in response to what stimulus, under what conditions and with what standards of performance. Tell students the specific consequences of successful and unsuccessful completion of tasks.

TACTIC Use real-life experiences to foster a desire to achieve

Elem/Sec

Have students read biographies of individuals who have overcome adversity and been successful in different careers. Have students relate their own experiences to those of characters in the biographies; some students may enjoy keeping a diary or other written log of these similarities.

TACTIC Use brainstorming to teach new behaviors

Elem/Sec

Many effective teachers have their students list attributes that lead to success as a way of teaching alternative behaviors. They describe the importance to success of effort and skills rather than luck, and engage students in role-playing situations to provide opportunities for alterative behaviors generated by brainstorming.

STRATEGY: Communicate Goals, Objectives, and Standards

Effective teachers clearly let students know what they are expected to do. This includes communication of what is to be done, under what conditions, and at what level of performance.

TACTIC Develop and use goal notebooks

Elem/Sec Develop a goal notebook for each student. In that notebook list the specific goals for the student. Include a statement of what the student is to do, under what conditions, and at what level of proficiency. Initial the goals as they are achieved and have students do the same.

TACTIC Write goals on the board

Elem/Sec Write your instructional goals on the board along with performance criteria and standards for mastery.

STRATEGY: **Teach Students to use Class Time Effectively**

Students profit more from instruction when they use classroom time effectively. Effective teachers allocate sufficient time to instruction and establish clear rules and procedures for how students are to spend their time in class. Transition activities are planned to cut down on time loss.

Tactic Hold students accountable

Sec

Have students keep records of numbers of assignments completed during the day. Prepare charts reflecting performance in functional measures (e.g., number of words read per minute, number and type of items correct and incorrect on mathematics worksheet). Have students justify drops in performance and accept responsibility for improvements.

PLANNING INSTRUCTION: Communicate Realistic Expectations*

STRATEGY	

TACTIC:

STRATEGY	

TACTIC:

STRATEGY	

TACTIC:

---

* Use this page to add your own tactics.

Managing Instruction

Discipline is consistently identified as a concern on public and professional opinions polls about education. Clearly, classroom disruptions are among the greatest deterrents to effective instruction noted by most teachers. Few of us are comfortable in situations that are unstructured and chaotic; this is particularly true for classrooms. Most students need and function better in orderly environments. This is why management principles and strategies related to them are part of effective teaching.

Effective classroom management principles include preparing for effective instruction. Effective teachers establish classroom rules and communicate them early in the school year. They teach students the consequences of following and not following their rules and they handle rule infractions and other classroom disruptions as quickly as possible after they occur. An overriding concern for many effective teachers is having students manage their own behaviors.

Effective classroom management principles include using time effectively. This means establishing routines and procedures, organizing physical space, setting transitions between work sessions, maintaining an academic focus, allocating time to academic activities, pacing instruction appropriately, and giving clear task directions.

Effective classroom management principles include establishing a positive classroom environment. Students are more motivated to learn when teachers accept individual differences, interact positively, and create supportive, cooperative classrooms. Students like school more when teachers are accepting and caring. An overriding goal in classrooms of effective teachers is active student response; when managing instruction, effective teachers use a variety of tactics to accomplish this goal.

COMPONENT	PRINCIPLE	STRATEGY
Managing Instruction	Prepare for Instruction	Set Classroom Rules Communicate Classroom Rules Teach Rules Consistently Handle Disruptions Efficiently Communicate Consequences of Behavior Teach Students to Manage their Own Behvior
	Use Time Productively	Establish Routines and Procedures Organize Physical Space Set Transitions Between Work Sessions Allocate Time to Academic Activities Maintain Academic Focus Pace Instruction Appropriately
	Establish Positive Classroom Environment	Make Classrooms Pleasant, Friendly Places Accept Individual Differences Keep Interactions Positive Establish Supportive, Cooperative Environment Make Students Respond and Participate

MANAGING: Table of Contents

PRINCIPLE: Prepare for Instruction . . . 55
- Set Classroom Rules . . . 56
- Communicate Classroom Rules . . . 59
- Teach Rules Consistently . . . 61
- Handle Disruptions Efficiently . . . 62
- Communicate Consequences of Behavior . . . 65
- Teach Students to Manage their Own Behavior . . . 66

PRINCIPLE: Use Time Productively . . . 69
- Establish Routines and Procedures . . . 70
- Organize Physical Space . . . 73
- Set Transitions Between Work Sessions . . . 75
- Allocate Time to Academic Activities . . . 76
- Maintain Academic Focus . . . 78
- Pace Instruction Appropriately . . . 79
- Give Task Directions . . . 80

PRINCIPLE: Establish Positive Classroom Environment . . . 85
- Make Classrooms Pleasant, Friendly Places . . . 86
- Accept Individual Differences . . . 88
- Keep Interactions Positive . . . 90
- Establish Supportive, Cooperative Environment . . . 92
- Make Students Respond and Participate . . . 93

PRINCIPLE

Prepare for Instruction

A fundamental part of instructional management is preparing to teach. Most of us learn better in orderly environments where consequences of success and failure are known. Most students need structure to be successful in school. They like to participate in establishing classroom rules and they need to have the rules reviewed periodically during the school year.

There are six strategies involved in preparing for instruction. They include setting classroom rules, communicating classroom rules, teaching rules consistently; handling disruptions efficiently, communicating consequences of behavior, and teaching students to manage their own behavior.

STRATEGY: **Set Classroom Rules**

A rule is a statement of standards for behavior. Classroom rules help teachers set limits and help students identify expected and appropriate behaviors. Rules sometimes indicate unacceptable or inappropriate behaviors, but it generally is better to use positive statements when writing rules (e.g., "You may leave the room when given permission.").

TACTIC Identify school and classroom rules

Elem/Sec

Teachers are expected to enforce general school rules. Students need to know that these rules are to be applied consistently in all rooms in the school and that it is their job to learn and comply with these rules as quickly and positively as possible. Fewer than ten rules should be designated for specific classrooms; each should be clearly stated and reviewed with students early and frequently throughout the school year. Effective teachers provide examples of appropriate and inappropriate rule compliance behaviors when teaching classroom rules to their students (e.g., "This is what I mean by raising your hand to ask permission to leave the room . . ." and "This is not what I mean . . .").

TACTIC Have students participate in rule-making

Elem/Sec

Most of us work better when we have a vested interest in the success of the project or activity. Some teachers designate a portion of their classroom rules to be determined with student participation and voting. Many allow for considerable flexibility in establishing time limits for student-selected rules because they often are too strict for large-scale compliance.

For examples of commonly used rules and a discussion of procedures for encouraging student participation in rule setting, see Everson, Emmer, Clements, Sanford, Worsham, (1989).

TACTIC Help students remember rules

Elem/Sec

Classroom rules are a must to achieve a good working classroom atmosphere. Keep your classroom list of rules brief, making sure students understand exactly what is expected of them. Try to arrange them so the first letters of key words help students remember the classroom rules. For example,

What **W**e **D**o **I**n **S**chool

Walk in the halls.

Wait for a teacher.

Display good behavior on playground.

Interest others in our work.

Say positive comments to classmates.

STRATEGY: **Set Classroom Rules**

TACTIC Determine what is important to classroom process

Elem/Sec

Choosing a set of rules for a classroom requires that a determination be made regarding behaviors that are important to that particular classroom. The nature of the content, the students' needs, the teacher's needs, and the instructional organization are all factors that need to be considered. For example, a kindergarten teacher might want to include a rule that allows students to take turns speaking without the constraints of handraising, but a fifth grade teacher might require students to raise their hands and obtain permission for speaking. One classroom situation might require students to "work quietly at their assigned desks" while another might address only the need for "completing assigned work on time." Each teacher must consider what is critical for his/her own classroom.

TACTIC Limit the number of rules

Elem/Sec

Limit the number of rules developed for a classroom to from 3 to 5 rules. Too many rules can weaken the impact, since students will not be able to remember or focus on a large number. Rules should be general enough to cover a variety of classroom situations. More specific situations, such as what to do during writing center time, can be addressed by developing "procedures" (steps for organizing and implementing specific activities), rather than creating rules.

TACTIC Involve students in selection of rules

Sec

Involving students in the process of rule formulation can strengthen the impact of classroom rules. This does not mean that students develop their own rules. The process can be controlled by having the teacher present all rules that he/she will require and asking the students to add any others that they think might be important. Giving students information about the general goals of the classroom (e.g., You are here to improve your math skills; It's important that we get along and work together; What rules will help us do these things?) can help students focus their thinking about rules in the direction of those particular goals.

TACTIC State rules in terms of observable student behavior

Elem/Sec

If students are expected to follow classroom rules, it is extremely important that they understand them and that they can clearly determine whether or not they are following them. The use of abstract terms such as "respect" is an example of ambiguity. Instead of stating a rule that says, "show respect for others," translate that into language that is more clearly observable, such as, "say and do nice things to others."

STRATEGY: **Set Classroom Rules**

TACTIC Include a "blanket rule"

Sec

To be certain that all critical classroom situations are covered, especially in secondary classrooms, include a "blanket rule" that states, "Follow teacher's directions right away." If you become aware of a situation that is a problem but is not covered by existing classroom rules, a statement can be made about the desirable corrective action (talking needs to stop, pencils needs to remain on desks) followed by the statement, "That is a direction that needs to be followed right away," and the direction immediately becomes a temporary rule statement. The critical aspect of this tactic is always to state the desired behavior and inform students that it is a direction, prior to implementing any consequences for noncompliance.

TACTIC State rules in positive form

Elem/Sec

As much as possible, rules should be stated in the form of positive behaviors rather than negative behaviors. For example, it is better to say, "Stay in your seat during assigned work periods" than "Do not get out of your seat during assigned work periods."

STRATEGY: **Communicate Classroom Rules**

Students sometimes behave in inappropriate ways because they do not know what to expect or because rules change from classroom to classroom. Effective teachers discuss rules early in the school year, post rules in clear view during the school year, and review rules periodically to remind students of their importance.

TACTIC Post rules to minimize misunderstandings

Elem/Sec

After identifying appropriate, reasonable rules, effective teachers generally post them in a conspicuous place in the classroom. This will enable you to refer to the chart frequently for review or reminders. It also will encourage consistency in rule implementation, since the rules are always visible to both students and teacher. Effective teachers also frequently review the rules as part of daily "business" at the beginning of the school day. It sometimes helps to separate school rules (e.g., No running in halls) from classroom rules (e.g., Ask permission to leave room).

TACTIC Signal rule infractions to prevent misbehavior

Elem/Sec

Many teachers give warnings (e.g., raised eyebrow/evil eye reminders) to students suggesting that they are "on the borderline" of misbehavior. Others simply ask students to repeat the rules when their behavior approaches noncompliance. Still others rehearse appropriate behavior as a method of preventing problems. For example, one teacher asked her students, before leaving the room to go to a school assembly, to describe appropriate behaviors for traveling from their classroom to the auditorium and for how they should act during the group activity. She also let them know the consequences for rule violations.

TACTIC Use self-monitoring to enhance rule compliance

Elem/Sec

Self-monitoring charts provide a simple, direct method for reviewing classroom rules with students. Have students write each rule on the front side of a 3 x 5 inch index card. Periodically during the day, have each student check the rules that he or she followed since last recording compliance.

TACTIC Set rules for rules

Sec

Too much teacher attention can reinforce inappropriate behavior for older students. If this is the case, it is often best to ignore inappropriate behavior and praise even the slightest increase in a student's efforts toward improvement. At the beginning of the year, explain to your students that you are very aware of what goes on in your classroom, and that there may be times when, for good reason, you choose to ignore misbehavior. Tell your students that during those times, they are to continue with their work and ignore the behavior also.

STRATEGY: **Communicate Classroom Rules**

TACTIC Be a good model for appropriate behavior

Elem/Sec

Remember to model those same behaviors that you hope to see your students practicing. For instance, during silent reading time, you should read silently, too. If a student begins to talk, model quiet behavior by approaching the student silently, establishing eye contact, and whispering, "Your voice is disturbing those of us who are reading." Being quietly courteous to your students helps them remember that this is a behavioral goal you are all working toward.

TACTIC Review rules frequently to ensure compliance

Sec

Classroom rules should be reviewed periodically. Frequent reviews are essential at the beginning of the school year when rules are being established. Effective secondary teachers often begin the school day with a review of current classroom rules. Sometimes they have students recite the rules and treat the activity like a game with teams responsible for listing each classroom rule. They review rules often, especially before a new lesson or unit of instruction begins. Other times requiring review are immediately after vacation periods, prior to changes in routines or schedules, or during times when rule-breaking seems to be increasing.

TACTIC Role-play rule situations

Elem/Sec

When communicating classroom rules to students, it is helpful to describe or have students describe situations in which a particular rule can be applied and then role-play that situation. Role-play what happens when the rule is broken (a good idea to have teacher rather than student role-play the rule breaker) and then role-play a parallel situation in which the rule is followed (have students role-play the positive examples). Include implementation of consequences as part of the role-playing.

STRATEGY: **Teach Rules Consistently**

A positive classroom environment is created when students follow rules. Because rules are expected behaviors, compliance and cooperation with them must be taught. The following activities address ways to teach classroom rules to students.

TACTIC Use an effective teaching model

Elem/Sec

Begin each lesson with a demonstration. Vary the demonstrations according to the content being presented. If students are expected to perform a skill after the lesson, show them what they are expected to do. If the performance is written, provide examples and nonexamples as part of the lesson. Use advance organizers to cue expected performance. Have students demonstrate that they understand and can perform the expected behaviors. Systematically go around the room and check for student understanding. Once students have demonstrated that the lesson has been understood, provide opportunities for independent practice. Circulate during practice sessions to provide supportive and/or corrective feedback. End each lesson with a review/evaluation.

TACTIC Initially reinforce every occurrence of adherence to rules

Elem/Sec

At the beginning of the school year or at the time a rule is introduced, it is important that students learn that the rule is important and that they recognize when they are following it. Therefore, initially it is a good idea to reinforce (praise, reward, etc.) all individuals engaged in rule-following behavior. During this stage, it is appropriate to deliver reinforcement to groups (e.g., "Everyone in the front row is ready to be a good listener for this lesson") but occasionally, individuals also should be identified for reinforcement . Once the rule is clearly established, the process of gradually reducing the amount of reinforcement can begin.

TACTIC Use the rule statement when giving reinforcement

Elem/Sec

If a student is following a particular rule, reinforcement (e.g., verbal praise, a sticker) should be delivered to the student with an accompanying restatement of the rule as it is displayed in the classroom. For example, if a rule says, "Use quiet voices," then the reinforcement statement could be, "David, thank you for using a quiet voice."

TACTIC State individual names when delivering praise

Elem/Sec

It is appropriate to deliver reinforcement to groups of students, but occasionally (especially at initial introduction of a rule), it is important that individuals receive reinforcement. In delivering reinforcement to an individual, use his or her specific name and identify the behavior being praised (e.g., "Moe, you are doing your assigned work. I'm so proud of you"). General, nondirected statements of praise (e.g., "I really like the way some of you are doing your assigned work") tend to become ineffective very quickly and may inadvertently reinforce inappropriate behavior.

STRATEGY: **Handle Disruptions Efficiently**

A disruption is any unexpected or inappropriate behavior or activity. Lack of involvement in classroom activities, task avoidance, and violations of rules are examples of disruptions that reduce learning efficiency. Effective teachers reduce the negative effects of disruptions by handling them quickly and promptly.

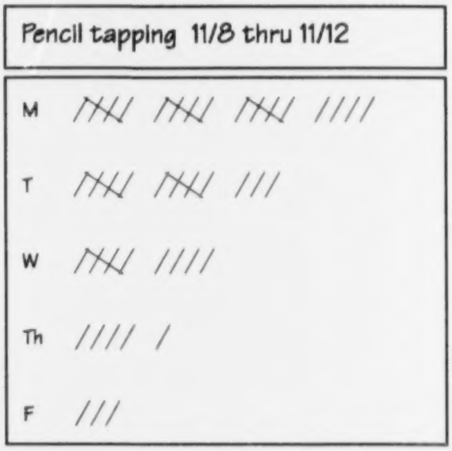
TACTIC Monitor disruptions systematically

Elem/Sec

Often minor disruptions can be managed effectively by having students keep track of them. First, define the problem behavior in clear, understandable terms (e.g., tapping pencil or pen on desk, paper, or other surface producing noise). Place a small chart on the target student's desk and have him or her note occurrences of the behavior on the chart. Often, the simple act of keeping track is sufficient to cause students to reduce levels of disruptive behavior (Figure 10):

FIGURE 10

Example Illustrating Reduction Levels in Disruptive Behavior



TACTIC Use other behavior to reduce disruptions

Elem/Sec

By randomly rewarding students for appropriate behavior, many teachers effectively control inappropriate responses. Set the alarm on an inexpensive digital wristwatch for a series of monitoring times. When the alarm sounds, note behaviors of target students (i.e., those likely to be disruptive). Provide tangible rewards for appropriate behavior, or keep records and provide rewards after a specific number of observations.

STRATEGY: **Handle Disruptions Efficiently**

TACTIC Avoid over-verbalizations

Elem/Sec

Over-verbalizing about an act of misbehavior tends to call attention to the problem and reinforce it—a result contrary to the desired outcome of eliminating it. When misbehaviors occur, verbalizations should offer either a solution or a negative consequence (e.g., "Pick up the crayons, now or five minutes of time-out") and nothing more. If it is necessary to explore the reasons for misbehavior it is better done after a negative consequence has been delivered. Moralizing or "nagging" is not an appropriate follow-up for misbehavior.

TACTIC Use nondisruptive techniques to control behavior

Elem/Sec

Minor misbehavior and misbehaviors that are just beginning often can be effectively controlled with nondisruptive techniques such as eye contact, proximity (move near the student's desk), or signals (pointing, shaking head). In using these tactics, one must decide whether teacher attention might reinforce rather than eliminate the misbehavior. The tactics are most effective when they can be used with one student without calling the attention of other students to the misbehavior.

TACTIC Offer choices to avoid power struggles

Elem/Sec

Sometimes dealing with misbehavior will undoubtedly result in a confrontation that may be more disruptive. Such confrontations can be averted by offering choices. For example, if a student tends to resist accepting a consequence such as going to time-out, the student can be given the following choices:

- Finish the assignment now, and have five minutes of free-time.
- Finish when you feel like it, spend 20 minutes after school, and have a letter sent to your parents.

These choices should be delivered in a calm, matter-of-fact tone and should be followed with the statement, "I hope you make a good decision." At this point, the teacher should become involved with students who are engaging in positive behaviors and ignore the misbehaving student until a compliance decision is made. Such choice presentations allow the teacher to withdraw immediately from a potential power struggle.

STRATEGY: **Handle Disruptions Efficiently**

TACTIC Teach students to ignore misbehavior

Elem/Sec

It is extremely helpful if class members are informed about situations that require them to ignore a particular student's misbehavior. If the need for ignoring is directed at a particular individual, the reason for such a practice is probably best explained when the targeted student is absent from the classroom. Justification of this practice should always be explained in terms that define the positive benefits to the targeted student as well as the class. Reinforcement of ignoring behaviors also should state the benefits to the "problem" student. ("We need to help Sue learn how to be a good listener. She will feel proud of herself when she does this. You can help her accomplish this by . . . .") This tactic never should be presented to students in such a way that it puts the targeted student in such negative regard that even positive interactions with the student are discouraged.

TACTIC Have students practice disruptive behaviors

Elem/Sec

Some disruptiveness can be managed by making students "practice" the inappropriate behavior beyond the point that they would like to stop. Some teachers find it particularly effective to have students practice disruptive behaviors during recess or other times when their classmates are having fun.

TACTIC Use classmates to control disruptions

Elem/Sec

Students can effectively manage the behaviors of their classmates. For example, to reduce inappropriate gestures, have students remove money from a group bank account. Start each day by giving group treasurers a specified amount of play money. If a student in the group behaves inappropriately, notify the treasurer to make a deduction. At the end of the day, provide rewards based on statements of the accounts.

TACTIC Use planned ignoring to deal with disruptions

Elem/Sec

Sometimes it is better to publicly "ignore" minor disruptions and only privately pay attention to them. For example, when one teacher notices a student tapping his pencil on the desk, she takes it as a cue that he is becoming bored with the lesson. She knows that his behavior will not escalate if she ignores it. She also knows he will not learn much if she doesn't reduce the disruption the behavior is causing in the student's learning and performance. By deciding not to focus on it or let it "disrupt" the flow of instruction, she keeps the distraction to a minimum.

STRATEGY: **Communicate Consequences of Behavior**

What happens after a student behaves appropriately or inappropriately has an effect on future behavior. Most students need rewards or penalties (i.e., consequences) to encourage acceptable behavior and discourage unacceptable behavior. Effective teachers clearly communicate consequences of behavior to their students.

TACTIC Use realistic rewards and penalties

Elem/Sec

The teacher who threatens too severe a punishment or offers too valuable a prize is likely to find that the consequences have little effect. Realistic rewards and penalties can be carried out and are appropriate in relation to the behavior (i.e., $1 for each letter correct on a spelling test is too high). Careful selection of prizes and penalties goes a long way in making management strategies related to them more effective.

TACTIC Include positive and negative consequences in plan

Sec

A classroom discipline plan should include both positive consequences for following rules and negative consequences for noncompliance. Planning for both components assures that students will be reinforced (positive consequences) when they follow the rules but also will be consistently dealt with when rules are not followed (negative consequences) . For some students, it is especially helpful to differentiate between the two types of consequences by referring to them as rewards (positive) and consequences (negative).

TACTIC Display consequences in classroom

Elem

Place a chart in a highly visible area of the classroom displaying both positive and negative consequences. Praise, good notes to parents, stickers, and happy faces are examples of "rewards," time-out chair for 5 minutes, time-out chair for IO minutes, sad note to parents, and a letter to the principal about misbehavior are examples of negative consequences.

TACTIC Establish hierarchy of negative consequences

Sec

A good discipline plan should include plans for negative consequences arranged in a hierarchy from least to most intensive consequences. For example, the first level of negative consequence could be a reminder, the next could be classroom time-out for 5 minutes, the next could be classroom time-out for 10 minutes, the next level could be note or phone call to parents, the next level could be a letter to the principal. It often is necessary to add a severe clause to the negative consequence hierarchy, which allows the teacher to deal with extremely disruptive misbehavior without going through all previous steps.

TACTIC Inform parents of rules and consequences of behavior

Sec

A good discipline plan should inform parents as well as students of classroom rules and consequences of behavior. Most effective teachers use newsletters or professional conferences to communicate behavioral and academic expectations as well as consequences for inappropriate and unacceptable responding.

STRATEGY: **Teach Students to Manage their Own Behavior**

Students can be taught to manage their own behavior. When children monitor their own behavior, teachers have more time to deliver instruction. Self-management leads to generalized behavioral control for students. Students can be taught to monitor academic responses as well as disruptive, inappropriate behaviors.

TACTIC Use cues to signal appropriate responses

Elem/Sec

Periodically during an instructional lesson and the school day, many teachers have their students rehearse self-management strategies. For example, a fifth grade teacher reminds his students that they are expected to act in "respectable" ways when they attend a school assembly. He cues them by reviewing what they are supposed to do there, and during the assembly, stands in view to remind them about expected behavior.

TACTIC Use talking to improve self-image

Elem/Sec

Develop a record sheet or small chart for each student to record positive self-statements during the week. Tell students to keep track of good things they have done during the day. Some students should be encouraged to record academic behaviors (e.g., "I got a 90 on my spelling test") and others should keep track of nonacademic responses (e.g., "I raised my hand before calling out an answer"). Periodically throughout the day, cue students to use the charts; help students remember positive behaviors, if necessary, and keep track of improvements so students see the value of their efforts.

TACTIC Provide assistance with self-monitoring

Sec

Many teachers have found it helpful to use auditory or visual cues to indicate when students are to engage in self-monitoring. For example, a high school teacher prepared auditory tapes with signals after random time intervals; she has students play the tapes quietly and keep track of appropriate academic responses (e.g., Am I following directions? Am I writing clearly?) while doing independent seatwork. She uses the self-monitoring records to chart progress and award special assignments and privileges.

TACTIC Monitor students' compliance with rules

Elem/Sec

When possible, allow students to be involved in making the rules as well as coming up with ideas for handing out rewards to those who become positive rule participants. Avoid having students punish others who break the rules. This is a teacher's responsibility and no student should be allowed to have authority over another.

STRATEGY: **Teach Students to Manage their Own Behavior**

TACTIC Reinforce decision-making behavior

Elem/Sec

When students "choose" to follow rules, reward their behavior with statements such as the following: "You have chosen to complete your assignment on time. That was a good decision." This tactic is especially helpful with students who may be prone to breaking a rule. Pointing out to them that following the rule is a better decision that is under their control encourages development of personal responsibility.

TACTIC Teach the meaning of responsibility

Sec

No student is too old to learn that responsibility means doing the right thing without being told or made to do it. Teaching this definition, identifying situations in the classroom in which such "responsible" behavior has been displayed, and reinforcing those behaviors will help establish this highly abstract concept as part of the student's value system.

TACTIC Establish self-monitoring techniques

Elem/Sec

Use tactics that require students to monitor their own behavior. Placing a card on a student's desk and having him or her record a tally mark for each time he or she engages in a certain behavior such as hand-raising (it is best to focus on positive behaviors) before answering a question or completing each page or assigned work, will help a student become aware of his or her performance.

For examples of applications of this technique, see the tactics bank in *Project RIDE: Responding to Individual Differences in Education.* (Beck, 1991).

TACTIC Have students provide their own feedback

Sec

Present students with data about their performance in a graphic form so that improvements or regressions are apparent. Rather than telling the student what the graph means, ask the student to interpret it. For example, if yesterday's graph shows 5 algebra problems completed correctly and today's graph shows 12 problems completed correctly, the student will be prompted to say that more problems were correct; therefore, he must be improving. This tactic can be applied to data about specific behaviors as well as academic performance.

MANAGING INSTRUCTION: Prepare for Instruction*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

PRINCIPLE

Use Time Productively

The concept of "time on task" has driven effective instruction for some time. Grounded in the idea that students need ample opportunities to respond to academic and other classroom tasks, time-management strategies have become central concerns for effective teachers. Establishing routines and procedures, organizing the physical classroom space, setting transitions between work sessions, maintaining academic focus, allocating time to academic activities, pacing instruction appropriately, and giving task directions are strategies effective teachers demonstrate when they use time productively.

STRATEGY: **Establish Routines and Procedures**

Routines and procedures communicate expectations for behavior in frequently repeated activities. Effective teachers set up procedures for collecting assignments, using restrooms, and participating in open classroom discussions. These procedures help students accomplish activities rather than permit or prohibit specific behavior.

TACTIC Have procedures for using classroom areas

Elem/Sec

Different areas of a classroom require specific instructions to minimize disruptions and encourage appropriate behaviors. For example, most teachers have procedures for materials on or in their desks as well as for those in student desks and storage areas. Generally, "stuff" on the teacher's desk is off limits without permission and "stuff" in students' desks is similarly treated as personal property requiring permission for use at other than designated times. Teachers also find it helpful to set aside time for students to organize their work areas periodically; this teaches good work habits and serves a preventive purpose by allowing "missing items" to be discovered early and replaced. Similarly, distractions created by bathroom trips, pencil sharpening excursions, and drink diversions can be minimized by setting up procedures.

TACTIC Have procedures for seatwork and instructional times

Elem/Sec

Keeping student attention, regulating participation, and providing support and feedback are important components of instruction in any content area. Effective teachers have procedures to minimize distractions (e.g., calling out answers) and inappropriate behaviors (e.g., practicing errors) during instructional presentations and independent practice. Some teachers vary their tone of voice to keep students' attention, while others give well-directed glances (the "old evil eye"). Checklists provide a simple and convenient method for keeping track of student participation rates and outcomes. Effective teachers also establish procedures for students to indicate that they need assistance during instructional presentations or independent practice. For example, the novelty of a small "SOS" sign attached to a pencil can be more effective with young children than the time-honored "raise your hand when you need help."

TACTIC Have procedures for transition times

Elem/Sec

Effective teachers have procedures for times between activities that occur before, during, and at the end of the school day. Some teachers start each day with a news item of interest, a short story, a riddle, or a "brain teaser" to stimulate thinking and help students settle into school. Others begin the day with "administrative tasks" (e.g., attendance, lunch count, school events, daily schedule). Still others combine interesting activities with school business to start or end the day.

STRATEGY: **Establish Routines and Procedures**

Many teachers also find procedures valuable in controlling room entry and exit behaviors of students; they help minimize disruptions that commonly occur when students make bathroom, library, or other extracurricular trips. Some teachers use short, high-interest activities to organize students after physical education or other outside classes. For example, one teacher placed a "noodle-doodle" (e.g., SPR ING= spring break, ...HICANS=Last of the Mohicans) on the board when her students were out of the room. When they returned, they were to quietly and independently write solutions to the word problem on a small ticket that she had placed on each desk. At the end of the day, she drew several "winners" from the tickets entered into the daily lottery.

TACTIC Have procedures for small group activities

Sec

Effective teachers "take care of business" before beginning small group instructional activities. They pass out papers or required books and have students sharpen pencils and collect other necessary materials before entering the instructional group. They also let students in the "out group" (i.e., those working independently while the teacher is with an instructional group) know what they are supposed to do and how to obtain help if they need it. Again, simple signals help minimize disruptions and keep students actively and appropriately involved.

TACTIC Have procedures for regular activities

Elem/Sec

Because some activities (e.g., lunch, recess, resource instruction) occur regularly, effective teachers have procedures for managing transitions associated with them. One teacher identified the order students went to the cafeteria by evaluating their behavior five minutes before lunch time. Another made weekly or biweekly assignments of students to routine classroom and administrative tasks (e.g., washing blackboards, watering plants, doing lunch count and attendance) and placed procedural responsibility for successful completion of the tasks with the "classroom helpers."

TACTIC Have guidelines and practice to assist with procedures

Elem/Sec

Most teachers find that students need to be reminded of classroom procedures on a regular basis. One teacher used a "procedures review session" to start each day. A colleague posted "Standard Operating Procedures" on a bulletin board at the front of the room to assist students in "remembering" what to do when getting ready for lunch, taking bathroom breaks, returning from recess or outside activities, and taking part in other regular classroom events.

TACTIC Develop a consistent daily schedule

Elem/Sec

As much as possible, develop a schedule that has the same activity at the same time every day. Once students begin to expect that activity at that given time, they adapt to the idea and resistance or complaining fade away.

STRATEGY: **Establish Routines and Procedures**

TACTIC Prepare for changes

Elem/Sec

If changes in scheduling are to occur, tell students in advance what to expect and explain their involvement. Accept their initial responses of irritation in a calm, positive way but encourage them to look at the positive aspects of the change (e.g., They get to go to a special program).

TACTIC Plan and communicate procedures clearly

Elem/Sec

Carefully plan procedures for such activities as moving to reading groups, rotating through learning centers, sharpening pencils, getting assistance, and going to the bathroom. At the beginning of the school year, carefully explain these procedures to the students and spend a couple of days rehearsing them and providing feedback about compliance. Although such activities may seem to delay the initiation of instruction in content areas, the time will be well spent in the long term since instructional time will not be disrupted by problems later.

STRATEGY: **Organize Physical Space**

The first activity many teachers tackle is arranging the physical classroom space to facilitate learning. Arrangements of furniture (students' and teacher's), placement of audiovisual equipment and visual aids (tape recorders, maps), and space for personal items (plants, clothing) are among things that must be considered.

TACTIC Structure classroom environments to increase attention

Elem/Sec

During the 1960's, the practice of reducing external stimulation was taken to extremes by making classrooms dull, highly structured environments. Variations of this idea can be effective. For example, a special education teacher uses each wall of his classroom to represent a different aspect of learning. The "learning" wall is at the front of the room; it contains a blackboard and at least one bulletin board and is used to focus attention on current learning activities (e.g., daily assignments, schedules, procedures). The "performance" wall contains evidence of past work: classroom charts, awards, and other records of student progress are displayed in this area. The teacher uses the "future" wall for information about upcoming units and activities. This type of organization helps his students see the classroom as a structured place with a purpose (i.e., school work and performance).

TACTIC Organize classroom to influence learning

Elem/Sec

Things in any classroom influence the behavior of students who work and play there. A basketball says "Play with me" to some children. A quiet, carpeted corner says "Come sit here and read" to some students and "What a great place to fight" to others. Careful organization goes a long way in insuring that materials and classroom spaces are used as they were intended. Some teachers "set the stage" for work by having their rooms divided into "work" and "play" areas. The pencil sharpener, paper, books, clock, and other materials likely to say "work" are kept in one area of the room. Playground equipment, games, and other appropriate materials are kept in the "play" area. Selective planning and use of these areas helps establish positive classroom habits and facilitates student learning.

TACTIC Consider schedule and instructional style

Sec

When organizing classroom space, it is important to consider what activities will be scheduled throughout the day and the instructional style that will be used. For example, a determination will need to be made as to whether instruction, at a given time, will occur in small groups of students working cooperatively, in large teacher-directed groups, in learning centers, or independent working areas. If the instructional program requires some flexibility, then that should be accounted for in terms of arranging the physical space.

STRATEGY: **Organize Physical Space**

TACTIC Consider student needs

Elem/Sec

Student needs are an important factor to consider in arranging physical space. For example, some students may need more quiet working areas, some may need "front row" seating due to sensory or attention problems, and some may need space free from movement or other distractions. It is always a good idea to have students face areas of the classroom that are relatively free from distractions. For example, if two groups are working simultaneously, have them face in opposite directions or have students face a part of the room that is the opposite from entrance ways or windows.

TACTIC Keep all areas visible

Elem/Sec

When organizing physical space, arrange areas of the classroom so that all spaces are easily viewed by the teacher at all times. Although it might be necessary to create a "private" corner by walling off a section of the classroom with bookshelves as barriers, it is still important that the teacher has visibility into that area from other areas in the classroom. This visibility is critical in terms of monitoring all student behavior at all times.

TACTIC Keep traffic areas free from obstacles

Elem/Sec

Early in the process of planning the physical arrangement of the classroom, identify traffic areas such as entrances, exits, bathrooms, and such. Plan to keep these areas free of furniture or activities.

TACTIC Make classroom a place for students

Elem/Sec

Student needs are an important factor to consider in arranging physical space. For example, effective teachers consider the age and developmental needs of their students when they prepare their classrooms for instruction. Teachers of young children break the traditional structure of a desk per child and allow for movement. Teachers of older students sometimes organize their rooms like business offices; they often build in time for socializing that is central to the lives of adolescents and young adults.

Tactic Organize activities to influence learning

Elem/Sec

Activities in any classroom influence the behavior of students who work and play there. "Noisy" activities (e.g., those in which students ask questions, need verbal assistance, or need materials) should be separated from those in which students are expected to participate quietly (e.g., library, listening center, puzzle center). Selective planning and use of activity areas helps establish positive classroom habits and facilitates student learning.

STRATEGY: **Set Transitions Between Work Sessions**

The time between any two activities is called a transition. Since disruptions often occur during these times, effective teachers minimize management problems that can occur during transitions by establishing rules and procedures for appropriate behaviors and activities during the time between one activity and the next.

TACTIC Alternate academics with physical activity

Elem

After students have been engaged in a lesson activity that requires intense concentration or listening, use physical activity as a transition. This activity can be brief, but will provide students with a needed change of pace. One such activity is called Memory Movement. An individual student begins the activity by moving in a certain way and the rest of the class imitates that movement. A second student then moves in a different way, and the class must imitate the movement of the first student and then the movement of the second student. A third student adds a new movement and all three movements are imitated in order from the first to the third. This activity continues for as many movements as are desirable. A good limit for transition periods is 5-8 movements.

TACTIC Establish clear procedures for transition periods

Elem/Sec

Teach students, even young ones, about transition periods. Let them know what they are, when they occur, and why they are important. Establish some clear procedures for transition periods. Quiet talking, bathroom breaks, or free movement about the classroom may be permitted transition activities. Making students aware of what is allowed and teaching them how to quickly refocus for instruction are valuable lessons that can be taught early in the school year.

For a list of transition problems and suggested solutions, see Everson, Emmer, Clements, Sanford, & Worsham(1989).

STRATEGY: **Allocate Time to Academic Activities**

The time set aside for an activity is called allocated time. While time spent responding during an activity is a better predictor of achievement then allocated time, effective teachers systematically designate specific times for academic instruction and communicate the scheduled activities to their students.

TACTIC Use homework to aid instruction

Elem/Sec

Homework should be related to content being presented in class. Twelve math problems may be used as practice for some students, while prereading assignments or spelling practice may be more appropriate for others. Effective teachers explain the purpose of any homework assignments, check to see that students have written assignments in small notebooks, and remind students to take necessary materials home. They also set aside time at the end of the school day to review expectations.

TACTIC Use a system for monitoring attendance

Elem/Sec

Save time and avoid disrupting working students by having them check themselves in each morning. One way to do this is to use an attendance chart made of large posterboard, hung on the inside of the classroom door. On the board, make pockets and cards for each student in the class. On each card, write students' names on both sides. On one side, write the word "in" and on the other side, the word "out." Laminate the cards. Instruct students that as they enter their work area each day, to turn their card to the "in" side; then, as they leave the room at the end of the day, to turn their card to the "out" side.

TACTIC Emphasize the importance of learning time

Elem/Sec

The amount of time devoted to certain activities sends unintentional messages to students. For example, if play periods are frequently extended 5 or 10 minutes beyond scheduled time but reading and math classes are always ended on schedule or slightly ahead of schedule, students soon begin to make some assumptions about what is important. Tell students that learning time is important and behave in a manner consistent with that value by scheduling lots of learning time.

STRATEGY: **Allocate Time to Academic Activities**

TACTIC Develop an awareness of nonacademic time

Elem/Sec

The school day is filled with situations that have a nonacademic focus. Transitions among lessons, bathroom trips, movement from one part of the school to another, distributing and collecting materials, arranging desks, and moving to seats all are activities that can easily begin to take up learning time. To develop an awareness of such activities, it is helpful to periodically use a stopwatch and record the amount of daily time spent on such activities. This infrequent but deliberate check will suggest whether intervention is needed to reduce the amount of time spent on such nonacademic activities. Collection of data on high amount of nonacademic time among several teachers may also signal the need for school-wide changes.

TACTIC Plan activities that promote academic goals

Elem/Sec

While it certainly is appropriate to plan activities that are enjoyable and have a seasonal or thematic focus, it is important that most activities be organized around an academic focus. This is not an impossible feat. For example, at Halloween time students can make and decorate pumpkins, but the academic focus could be measurement (each student has to make a pumpkin that is a designated number of inches high), reading (decorations have reading words written on the back and can only go in the "trick-or-treat" bag if the word is read correctly), or spelling (cut out individual letters to spell words, outline with candy corn and use to decorate the classroom). Activities that require intensive time investments without academic focus should be avoided.

STRATEGY: **Maintain Academic Focus**

Many students are masters at bringing up irrelevant material during academic lessons. Teachers must be prepared to redirect classroom discussions to minimize the negative effects of disruptions and keep their instruction "on the right track."

TACTIC Use questions to encourage high rates of responding

Sec

Teachers commonly ask questions during instructional presentations. Many teachers find this method effective if the questions can be answered with direct responses (e.g., What is the chemical formula for water?); they use questions to provide one form of controlled practice. The most effective method uses frequent questions to allow students to demonstrate acquisition levels of knowledge and to provide ample opportunities for corrective or supportive feedback from teachers.

TACTIC Use errors to teach academic content

Elem/Sec

Many students become discouraged when they give incorrect responses during instructional presentations. Effective teachers turn these occasions into opportunities for instruction. For example, after an incorrect response, a second grade teacher indicates the reason(s) the answer was wrong and asks another question of the same student to provide a second chance to demonstrate knowledge. She usually changes the level of complexity of subsequent questions to increase the likelihood of producing a successful response. She also sometimes uses prompts, hints, and other cues to produce correct answers. Carefully structured interactions such as this provide ample opportunities for students to practice and receive supportive feedback, thereby maintaining an academic focus during instructional presentations.

TACTIC Monitor group instruction

Elem/Sec

Many effective teachers use tape recorders to monitor their instructional presentations. They listen to the tapes and note levels and types of questions being used with different students. They also use the tapes as records of student performance.

TACTIC Provide assistance quickly during independent work

Elem/Sec

Fluent responses are the goal of most academic instruction; they are less likely to occur if students are struggling to sound out each letter of a word or find a math fact. Effective academic focus is evident when teachers have a system for helping students find help quickly during independent activities. Some teachers simply walk around their rooms and respond to students who raise their hands to ask for help. Others develop more personalized methods (e.g., small decorated signs with messages written on them). The key is to provide assistance quickly so that students can continue with assignments rather than wait and lose interest in what they are doing.

STRATEGY: **Pace Instruction Appropriately**

Pacing refers to the match between presentation rate during instruction and students' comprehension. Appropriate pacing requires that adequate time be available for students to sufficiently understand expected behaviors to perform them independently. Effective teachers monitor instructional pacing.

TACTIC Control assignments to increase correct answers

Elem/Sec

By carefully selecting items, teachers can control the level of difficulty of any assignment. Independent practice assignments in which students demonstrate high (i.e., 80-90 percent correct) degrees of accurate performance are better than practice in "harder" work (with lower accuracy). Because most students perform skills at different levels, effective teachers prepare varied assignments. For example, a fifth grade teacher assigned one of her student's items for one page in the basal math text while 10 different problems were assigned to another student. Her goal was to produce individual practice sheets that students could complete with high degrees of accuracy.

TACTIC Keep lessons moving

Elem/Sec

When developing lessons, plan for a brisk pace that includes presentation, response, corrective or supportive feedback, next presentation, and continuing feedback. Generating a large number of examples will allow for this pace. Avoid extended time with individual students. (Offer individual help at a later time.) Corrective feedback should be to the point. Avoid elaborate explanations. Also avoid engaging in off-task topics. If students introduce an extraneous topic, simply state that you would like to discuss that at another time and immediately return to the task.

TACTIC Change formats but not skills

Elem

It often is necessary to give students lots of practice opportunities to master a skill (e.g., reading a list of new words). One way to provide extended practice without risking boredom is to keep the skill the same but vary the format. This technique is especially critical for young children. For example, if students are learning to read the names of the months, first present the names on flash cards written in different colors, next write the words on the chalkboard and have students read them. A third format could be a game in which several cards are placed in a shoebox along with a joker card. The cards are drawn from the box one at a time and if read correctly remain out of the box. Students try to remove all of the cards from the box before the joker card is drawn. Each of these activities requires the students to perform the same skill but one is a flashcard drill, one is a chalkboard activity, and one is a game. Planning for these variations in format allows the lesson to continue at a brisk pace with a high level of interest.

STRATEGY: **Give Task Directions**

Directions are rules for what to do on specific tasks. They help teachers set limits and students identify expected and appropriate behaviors. Some teachers present specific direction-following activities as part of their academic content instruction.

TACTIC Teach student ways to remember directions

Elem/Sec

Select a student to start the activity; give this student a series of three or four directions. Have the direction follower repeat the sequence and describe a simple pattern for remembering what to do before actually completing the requested actions. Continue the activity by having the first student select the next direction follower and provide the series of directions to follow. Repeat steps so that each student has a chance to participate.

TACTIC Use self-recording to improve direction following

Elem/Sec

Self-recording is a procedure students can use to decide if they have performed expected behaviors and kept records of their performance. Prepare a data collection sheet noting the target behavior (e.g., following directions) at the top; an index card divided into 30 or 40 smaller boxes could easily be adapted to any target behavior. Prepare a worksheet that requires students to repeatedly follow a simple set of directions (Figure 11). Tell students to evaluate whether they are following directions before completing a boxed question mark item. Repeat the task several times during the day during different academic lessons (e.g., reading, spelling, science) and keep records of performance improvements as reflected on the self-recording sheets.

FIGURE 11

Example of Self-monitoring Task Sheet

Directions: Underline the first incorrect sum, cross out the second incorrect sum, circle the first correct sum, and put a box around the second correct sum.

Example:		2 + 2 =	a. ④	b. $\underline{6}$	c. $\cancel{3}$	d. $\boxed{4}$
	1.	2 + 2 =	a. 4	b. 6	c. 3	d. 4
	2.	5 + 2 =	a. 6	b. 7	c. 7	d. 8
$\boxed{?\ Y\ N}$	3.	6 + 3 =	a. 9	b. 6	c. 3	d. 9
	4.	Continue to appropriate limit based on student skills and interests.				

STRATEGY: **Give Task Directions**

TACTIC Have students follow directions at home

Elem/Sec

As with any new skill being learned, practice at home can greatly improve performance in school. For example, if direction-following sheets (see previous page) are being used in school, prepare related activities for use at home (Figure 12).

FIGURE 12

Example of Self-monitoring Task Sheet for Home Use

Directions: Cross out the first incorrect program, circle the second incorrect program, underline the first correct program, and put a box around the second correct program.

Example:		7:00 TV Show =	a. Jeopardy	b. ~~Jeffersons~~	c. Jeopardy	d. Coach
	1.	7:00 TV Show	a. Jeopardy	b. Jeffersons	c. Jeopardy	d. Coach
	2.	Popular Song	a. Beat It	b. Ugly	c. Jeopardy	d. Beat It
? Y N	3.	Popular Movie	a. Batman	b. Batman	c. Night Trip	d. Coach
	4.	Continue to appropriate limit based on student skills and interests.				

TACTIC Have students practice following directions at home

Elem/Sec

Have students generate a sequence of directions to be followed at home. Interest can be added by having them come up with series of three or four directions that require a specified time limit (e.g., exactly two minutes) to complete. Have a family member serve as record-keeper and participant for comparisons.

TACTIC Use clear, simple language

Elem/Sec

When giving directions, it is important that the language used be clear and simple. A good strategy is to keep the lowest functioning student in the classroom in mind when planning directions. If it is necessary to use vocabulary that some students might not understand, define that vocabulary as part of the direction. If complete sentences are used, emphasize words that are directive (e.g., fill in the blanks, answer each item).

For guidelines on giving directions or commands that increase the rate of student compliance, see Walker & Walker (1991).

STRATEGY: **Give Task Directions**

TACTIC Provide models

Elem/Sec

Modeling tasks is a good way to provide visual input in addition to verbal input; it also helps clarify what is expected. Directions should be given one at a time and modeled by the teacher immediately.

TACTIC Check students' understanding of directions

Elem/Sec

Check for understanding of directions by asking the students to retell (in their words) what is to be done before they begin to work. This tactic is especially critical when directions are to be followed in a particular sequence. Asking the students to tell what is to be done first, next, next, and last will clarify whether they have attended to the sequence.

MANAGING INSTRUCTION: Use Time Productively*

STRATEGY	

TACTIC:

STRATEGY	

TACTIC:

STRATEGY	

TACTIC:

---

* Use this page to add your own tactics.

PRINCIPLE

Establish Positive Classroom Environment

Most students respond and perform better when teachers are supportive and helpful during learning activities. Student motivation also is more positive when teachers show sincere interest in their work (e.g., what they are teaching) and the work of their students. Effective teachers carefully assess the learning atmosphere in their classrooms; they "read" their students and strive to make the classroom climate comfortable and supportive. By making their classrooms pleasant, friendly places, effective teachers keep interactions positive and their students respond and participate in learning activities. By accepting individual differences, effective teachers make their classrooms supportive and cooperative learning environments for all students.

STRATEGY: **Make Classrooms Pleasant, Friendly Places**

Most people work better and enjoy what they are doing in clean, organized environments. Students are more active learners when they believe their presence and opinions are valued. Effective teachers make their classrooms pleasant, friendly places to learn.

TACTIC Use background music to support instruction

Sec

Music relaxes many students and helps them focus their attention. Research supports the use of classical music as a background stimulus, but some students do better when rock music is played.

TACTIC Use general praise to support students' learning

Elem/Sec

It takes about a minute or two to go around a classroom and indicate something positive about each student. Some teachers take a break during instructional presentations to dispense a comment to each student such as, "Your new haircut looks very nice," "That was a great math sheet," or "Thanks for always being on time." Others use transition times (e.g., right before lunch, before leaving for an assembly) as opportunities to make students feel good about being in their classrooms.

TACTIC Use praise when students leave and enter school

Elem/Sec

Many effective teachers take a little time each day, as students enter school in the morning, to point out positive things that happened on previous days. Some teachers do this as a way of saying "good-bye" to students at the end of the school day, to acknowledge their positive behavior that day.

TACTIC Sandwich negatives between positives

Elem/Sec

Despite our efforts, students make mistakes and need feedback about them so that they can learn more effectively. Sandwiching negative feedback between two "slices" of praise helps soften reactions to mistakes:

> *Jim, you amaze me. You always are willing to help others during reading. I really think that is nice.*
>
> *There are some times when you need help, too. For example, this math paper has a few mistakes on it.*
>
> *You're so helpful to others, let me help you with these.*

STRATEGY: **Make Classrooms Pleasant, Friendly Places**

TACTIC Use frequent review to bolster confidence

Elem/Sec

Work toward making the students in your class feel successful from the start. Begin the year with a review of previously learned content and use familiar reading materials such as favorite poems, nursery rhymes, and stories. Recognition of previously learned facts and concepts and memorized readings will bolster confidence and help students move to more difficult, unfamiliar material.

TACTIC Listen carefully and be supportive

Elem/Sec

Listen to students attentively and acknowledge feelings. Comments like, "You're kind of scared about being in the play," or "You are really excited this morning!" reassure students that you see and hear them and know their feelings. At the same time, a matter of fact attitude will not place so much attention on student feelings that they replace good work habits.

TACTIC Greet students individually

Sec

Greeting students individually as they enter the classroom, whether it is first thing in the morning or at a specified time is one way to develop a climate that is friendly. The greeting does not have to be elaborate—just a smile, eye contact, and "Good morning, Joe."

TACTIC Smile before November

Elem/Sec

There is an old adage about discipline that suggests that teachers should not smile before November so that they can communicate to students that they mean business. Unfortunately, the presence or lack of a smile does not maintain good discipline. Consistency in establishing rules, reinforcing rules, and providing negative consequences is what communicates to students that teachers mean business. So as long as consistency is maintained, go ahead and smile—even on the first day—to let students know that they are in a friendly place where even the teacher is happy to be there.

TACTIC Make classrooms look attractive and inviting

Elem/Sec

Even though bulletin boards and classroom displays can sometimes be time-consuming, they do have a purpose. They help make classrooms look like inviting, pleasant places. Even a simple display of posters can add a little cheer to bare walls. At the very least, an eye-catching display that is visible immediately after one enters the door is essential.

STRATEGY: **Accept Individual Differences**

Classroom management and teacher effectiveness are influenced by characteristics of students making up instructional groups. Adjustments sometimes are needed to meet special learning needs of students. Effective teachers accept individual differences and plan activities to accommodate rather than avoid or punish students.

TACTIC Break assignments into manageable parts

Sec

Long assignments sometimes present problems for some students. Effective teachers break them up into smaller units and divide the work time into different sessions. Many students enjoy working on a tough assignment for 10-15 minutes and returning to it after a 5-minute "feedback" break.

TACTIC Encourage students to select individualized work rates

Sec

Students often perform more efficiently when they are given an opportunity to set their own standards for completing tasks. By keeping records, their teachers are able to monitor the levels and amounts of work being completed and offer suggestions for better standards if those set by the students are not appropriate.

TACTIC Be flexible with standards when scoring performances

Elem/Sec

Teachers make up classroom tests and criteria for assigning grades to them. Individual differences among students can be minimized by designating that a range of scores entitles a student to a letter grade. For example, on spelling tests, one teacher let 15, 16, 17, 18, 19, or 20 items correct earn an "A" grade. She did this to reduce anxiety and account for differences in her students' spelling skills. Sometimes she used more traditional standards as well.

TACTIC Permit and monitor individual progress

Elem/Sec

What constitutes progress is relative. A student who has proceeded very slowly should receive praise for any slight improvement. Another child who usually does well might not receive specific praise for each small increase in production. It is important to observe and note individual differences and praise students deliberately and effectively, not haphazardly.

TACTIC Develop a discipline plan

Elem/Sec

Establishing a discipline plan that includes rules, rewards, and consequences that will be implemented consistently in the classroom will help assure consistent treatment for all students.

STRATEGY: **Accept Individual Differences**

TACTIC Identify individual needs

Elem/Sec

Looking through cumulative folders, reading assessment reports, talking to parents and previous teachers, and conducting assessment activities in the classroom are means to help identify individual differences. Knowing about individual needs allows teachers to plan ways to meet those needs. It is important to separate objective data about a student from information that appears to be someone's subjective opinion, especially if that opinion does not seem to be supported by the data. If someone begins telling about a student with a subjective, stereotyped statement ("That's the worst kid I ever taught"), always ask for specific examples to support that statement and then validate or refute the specific examples—not the stereotype—by collecting your own data.

TACTIC Be aware of personal biases

Elem/Sec

Know yourself and be honest about any personal biases that exist. Ask yourself, "Am I treating all children in my classroom in an equitable way?" Look for evidence of equitable treatment. Did you smile at every student today? Did you say something positive to everyone? Were you especially critical of any particular student? To whom did you give personal attention? If someone was disruptive today, can you 'wipe the slate clean' and start a brand new day tomorrow? Do you hold feelings of resentment because a particular student has been placed in your class? This type of periodic self-evaluation can help identify personal biases and feelings that interfere with equitable treatment of students.

STRATEGY: **Keep Interactions Positive**

Day-to-day activities in school can be tiresome and tedious for teachers and students. Effective teachers keep interactions positive by varying approaches to independent practice, structuring activities for high levels of success, and providing personalized feedback for students.

TACTIC **Use activities to showcase student skills**

Elem/Sec

Some teachers use activities to point out positive qualities of students. For example, a fourth grade teacher selects a different student each day to be "teacher" and make important decisions (e.g., time for recess) after consulting with other adults in the room. She also periodically singles out a different student to be "king/queen for a day" and receive special rewards. She has classmates write positive comments about the student being treated as royalty and she incorporates some of them into a letter that is sent home with the student at the end of the school day. Another teacher puts pictures of her students on a bulletin board and periodically provides lists of positive characteristics for each of them; she also lets classmates contribute comments to the "VIP BULLETIN BOARD."

TACTIC **Be flexible in difficult situations**

Elem/Sec

Sometimes assignments or daily activities will generate considerable frustration for students. Making changes reduces frustration and keeps interactions positive. For example, if a spelling test is going to be timed for the first time, careful selection of words (mostly easy ones) can help reduce the problems created by the timing. When spontaneous factors interfere with ongoing activities, effective teachers change their plans to prevent frustration and negative consequences. Many of them keep notebooks with "great ideas for tough times" to use when regular plans need to be adjusted.

TACTIC **Help students see their strengths**

Elem/Sec

Give students a chance to select their favorite activities to do sometime during each school day. Usually, they will select things they do well. Performances on these activities are an excellent source of information for improving students' opinions about themselves and their school experiences.

TACTIC **Keep records of students' skills**

Elem/Sec

Many students like to be reminded of their positive features. Some teachers have their students keep diaries or scrapbooks to showcase achievements. They also use charts or other written records as a source of material for "biographies or autobiographies of famous people" in which they feature accomplishments of different students each week.

STRATEGY: **Keep Interactions Positive**

TACTIC Use errors to improve performance

Elem/Sec

Make it clear to your students that errors are a part of learning. Give feedback that stresses positive aspects of performance and treats corrections in a matter-of-fact way. Acknowledge the effort that students are making, rather than just correct answers.

TACTIC Use strengths to build confidence and importance

Elem/Sec

Focus on student strengths more than on areas of weakness. For instance, if one of your students is good in sports, that interest can become the focal point for artwork, reading, writing, or special projects. If another student is a meticulous printer but needs more practice with spelling, encouraging her to use her printing skills in many ways will provide practice in spelling.

TACTIC Offer praise freely

Elem/Sec

The balance between praise and criticism should strongly favor praise. Students should be told frequently what they are doing right. Teachers who focus on pointing out what students are doing wrong often find that negative behaviors increase with this attention.

TACTIC Establish rapport with students

Elem/Sec

Establishing rapport with students usually requires some time spent interacting with them on a personal level and accepting their feelings and ideas without judgment. These interactions do not necessarily need to be conducted on an individual basis, but they do need to focus on personal issues or needs.

TACTIC Support students for doing the right thing

Elem/Sec

Teachers often are forced to concentrate so much on problem behaviors that they ignore positive responses. Effective teachers provide praise and support for students who are coping with negative behaviors from their classmates.

TACTIC Support students with peer tutoring

Elem/Sec

Effective teachers often assign students to serve as peer tutors in lower grades. The interaction is generally positive if the older student is teaching materials that have been mastered and the younger student is interacting with a supportive role model.

STRATEGY: **Establish Supportive, Cooperative Environment**

There are times when individualistic, independent approaches to learning are appropriate and necessary. Students also profit when learning environments are set up to encourage supportive and cooperative relations. Classrooms of effective teachers are supportive environments for students to grow and learn.

TACTIC Encourage parents to support classroom behavior

Elem/Sec

Students often work better when they know that everyone has their best interests in mind. Effective teachers keep parents involved with their child's school experiences in cooperative ways. For example, one sixth grade teacher has students keep track of their problem behaviors during several instructional activities. She arranges with the students' parents to exchange points earned for keeping these behaviors below a target rate for "TV time" or other cooperatively agreed upon awards.

TACTIC Model supportive, cooperative behaviors

Elem/Sec

When students see teachers offering praise, inviting others to help, and accepting individual differences, they are more likely to display those behaviors themselves. Consider a classroom situation: A student spills a box of word cards. Teacher A could respond with criticism: "Did you have to do that? What a mess! Hurry up and clean it up. We'll have to wait for you to finish before we can start math." Teacher B responds with support and cooperation: "How unfortunate. I know you didn't want that to happen. Let's help pick up the cards, so we can get started on math." The different responses will undoubtedly result in different student behaviors when similar situations occur in the future. The teacher's model is the key to the difference.

TACTIC Deliver negative consequences calmly

Elem/Sec

Avoiding emotion-laden, negative responses when discipline is required will help establish a supportive environment. Being firm and consistent is not synonymous with being angry and critical. The former approach delivers negative consequences that communicate that the behavior was inappropriate but that caring still exists for the student. The latter approach tends to invite hostility, tear down personal regard, and communicate dislike for the individual.

STRATEGY: **Make Students Respond and Participate**

Time students spend actively responding to specific tasks during instructional presentations is related to their performance on those tasks. Effective teachers monitor students' engaged time and ensure that all students participate during instruction.

TACTIC Change positions to control engaged time

Elem/Sec

A teacher's position can have positive effects on student behaviors. Sometimes inappropriate behaviors (e.g., not completing an assignment) can be modified simply by moving closer to a student.

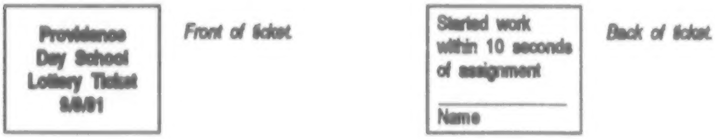
TACTIC Use lotteries to keep students actively engaged

Elem/Sec

Identify several behaviors that reduce the likelihood that students will start assignments and stay actively engaged with them (e.g., making comments about appropriateness of work, not starting on time). Write the positive counterparts of those behaviors on tickets (Figure 13) and have students put them in a lottery box on the teacher's desk each time an appropriate response is exhibited. Periodically select a lottery winner from the tickets that have been entered during the day.

FIGURE 13

Example of Lottery Ticket



Providence
Day School
Lottery Ticket
9/9/91

Front of ticket

Started work
within 10 seconds
of assignment

Name

Back of ticket

TACTIC Use signals to focus attention

Elem/Sec

Students sometimes engage in behaviors without realizing that they are interfering with productive classroom activities. Effective teachers use cues and signals to let these students know that their behavior is inappropriate. Sometimes a raised voice brings attention to problem behavior; some teachers turn off the classroom lights to "suggest" that their group is too noisy. One eighth grade science teacher uses verbal cues to redirect behaviors. During a lesson on dinosaurs, one of her students started tapping a pen on the edge of his desk. At an opportune time, the teacher gained the student's attention with a "psst" and glance at the pen. The student stopped tapping the pen and continued with his work.

STRATEGY: **Make Students Respond and Participate**

TACTIC Use related activities to facilitate generalization

Elem/Sec

To encourage your students to investigate the meanings of unfamiliar words and practice using the dictionary, present them weekly with a "word of the week." Supply one clue to the word each day. For example, for the word supersede, clues might be: meaning: to take the place of; synonym: replace; prefix: super; from Latin supersedere. Have your students use the clues to identify the word, then place their answers in a designated box. You can check the box at the end of each day and announce the word and winners during the week or wait until Friday to determine the winners.

TACTIC Use multiple choice strategies

Elem

Sometimes students are reluctant to respond because they are uncertain of their ability to be correct. One strategy that will allow them to respond with confidence is to provide a multiple choice answer. For example, "John, is a peach a fruit or a vegetable?" The types of choice provided should be adjusted for individual students. If a student is very uncertain or low functioning, the correct answer should be made more apparent. For example, "John, is a peach a fruit or an animal?"

TACTIC Call on everyone

Elem/Sec

At some time during a lesson, every student should be called on for a response. Calling on only those students who raise their hands allows certain students to be nonparticipants. If students know that they will be accountable during the lesson for some response, they are more inclined to become active participants. Avoid calling on students at times when it is apparent that they are not paying attention or when they undoubtedly will not know an answer. This discourages further participation.

TACTIC Reward class participation

Elem/Sec

Before a class presentation, tell students that specific behaviors (e.g., raising hand to ask or answer question, answering question correctly) will earn group rewards (e.g., marbles placed in jar in full view of class). Provide a group reward when a specified number of appropriate responses has been reached. For older students, give bonus points on weekly exams or unit tests.

MANAGING INSTRUCTION: Establish Positive Classroom Environment*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

Delivering Instruction

Teaching is systematic presentation of content assumed necessary for mastery of the subject matter being taught. Good teaching doesn't just happen. It involves strategic planning to decide what and how to teach. It involves effective orchestration of classroom management principles and curriculum development ideals. It involves carefully planned delivery of instruction focused on specific academic tasks and content areas of appropriate curriculum. It involves monitoring and systematically evaluating the course of instructional units and students' responses to them. Of central interest to many effective teachers are principles for effectively delivering instruction. Delivering instruction is a complex process involving the following principles: present instruction, teach thinking skills, motivate students, provide feedback, provide relevant practice, keep students actively involved, and modify instruction.

When presenting content, teachers must have students' attention. Effective teachers review previously covered material and introduce new material by relating it to known content whenever possible. They strive to make lessons relevant to the developmental and academic needs and skills of their students.

Effective teachers recognize that students should be taught thinking skills in addition to facts and information. They model ways to solve problems and strategies for finding answers as they deliver instructional presentations.

Effective learning requires that students' interest and attention to instructional tasks be sustained. Effective teachers incorporate methods for motivating students into their teaching repertoires. They focus on intrinsic (i.e., internal sources of satisfaction) and extrinsic (i.e., external sources of satisfaction) motivation.

Effective teachers provide immediate, frequent, explicit feedback. They know that students learn better when they have opportunities to work on assignments or school activities under supervision; ample time and opportunities are provided for guided and independent practice. Effective teachers teach skills until students master them, and use information gathered during instructional presentations and practice sessions to decide when and how to modify their teaching so that all students can be successful.

COMPONENT	PRINCIPLE	STRATEGY
Delivering Instruction	Present Instruction	Review Prior Skills or Lessons
		Gain Students' Attention
		Present Instructional Goals and Importance
		Make Lessons Relevant
		Maintain Attention
		Provide Organized Lessons
		Pace Instruction
		Interact Positively with Students
		Monitor Performance During Practice
		Provide Clear Directions
		Check Student Understanding
	Teach Thinking Skills	Model Thinking Skills
		Teach Fact-finding Skills
		Teach Divergent Thinking
		Teach Learning Strategies
		Teach Students to Monitor their Thinking
	Motivate Students	Show Enthusiasm and Interest
		Help Students Understand Importance of School Work
		Use Extrinsic Rewards Effectively
		Account for Level and Student Interest
		Help Students Believe they Can Do their Work
	Provide Feedback	Give Immediate, Frequent, Explicit Feedback
		Provide Task-specific Praise and Encouragement
		Use Reexplanation to Improve Performance
		Model Correct Performance
		Provide Prompts and Cues
	Provide Relevant Practice	Develop Automaticity
		Provide Sufficient Opportunity for Practice
		Use Seatwork Effectively
		Provide Students with Help
		Use Relevant Tasks and Varied Materials
		Assign the Right Amount of Work
		Vary Methods During Practice

COMPONENT	PRINCIPLE	STRATEGY
Delivering Instruction (cont'd)	Keep Students Actively Involved	Review Prior Skills or Lessons Select Appropriate Amounts of Content Select Appropriate Pace Monitor Performance Regularly Use Peers to Improve Instruction Provide Ample Opportunities for Success Provide Opportunities to Fail Monitor Engagement Rates
	Modify Instruction	Modify Lessons to Meet Student Needs Provide Additional Information Adjust Pace

DELIVERING: Table of Contents

PRINCIPLE: Present Instruction . . . 103
- Review Prior Skills or Lessons . . . 104
- Gain Students' Attention . . . 105
- Present Instructional Goals and Importance . . . 106
- Make Lessons Relevant . . . 107
- Maintain Attention . . . 108
- Provide Organized Lessons . . . 109
- Pace Instruction . . . 110
- Interact Positively with Students . . . 111
- Monitor Performance During Practice . . . 112
- Provide Clear Directions . . . 113
- Check Student Understanding . . . 114

PRINCIPLE: Teach Thinking Skills . . . 117
- Model Thinking Skills . . . 118
- Teach Fact-finding Skills . . . 119
- Teach Divergent Thinking . . . 121
- Teach Learning Strategies . . . 123
- Teach Students to Monitor their Thinking . . . 124

PRINCIPLE: Motivate Students . . . 127
- Show Enthusiasm and Interest . . . 128
- Help Students Understand Importance of School work . . . 129
- Use Extrinsic Rewards Effectively . . . 131
- Account for Level and Student Interest . . . 132
- Help Students Believe they Can Do their Work . . . 133

PRINCIPLE: Provide Feedback . . . 137
- Give Immediate, Frequent, Explicit Feedback . . . 138
- Provide Task-specific Praise and Encouragement . . . 140
- Use Reexplanation to Improve Performance . . . 141
- Model Correct Performance . . . 142
- Provide Prompts and Cues . . . 143

PRINCIPLE: Provide Relevant Practice 145
  Develop Automaticity 146
  Provide Sufficient Opportunity for Practice 147
  Use Seatwork Effectively 149
  Provide Help for Students 150
  Use Relevant Tasks and Varied Materials 151
  Assign the Right Amount of Work 152
  Vary Methods During Practice 153
PRINCIPLE: Keep Students Actively Involved 155
  Select Appropriate Amounts of Content 156
  Select Appropriate Pace 157
  Monitor Performance Regularly 158
  Use Peers to Improve Instruction 159
  Provide Ample Opportunities for Success 160
  Provide Opportunities to Fail 161
  Monitor Engagement Rates 162
PRINCIPLE: Modify Instruction 165
  Modify Lessons to Meet Student Needs 166
  Provide Additional Information 167
  Adjust Pace 168

PRINCIPLE

Present Instruction

Teaching is systematic presentation of content. Effective teachers use the following strategies when they present instruction: reviewing prior skills or lessons, gaining students' attention, presenting instructional goals and noting the importance of those goals, making lessons relevant, maintaining attention, providing organized lessons, pacing instruction, interacting positively with students, monitoring performance during practice, providing clear directions, and checking student understanding.

Effective instruction begins with a review of skills or content that students already have mastered. New material should be introduced using a context students understand based on their prior knowledge. Of course, students do not learn unless they attend and become involved in instructional tasks. Effective teachers state the importance of instructional goals and objectives as a means of gaining student attention and fostering learning. Effective teachers also vary their examples and nonexamples as a way of making lessons relevant to students with different instructional backgrounds and needs.

Making lessons relevant is one way to maintain student attention and improve instructional presentations. Effective teachers are enthusiastic, organized, and positive during instructional presentations. They pace instruction appropriately based on the learning characteristics of the students in their classrooms, and are responsive to student needs. They recognize the importance of clear communication of instructional tasks and demands, and check frequently to ensure that their written or oral directions are understood. They also check student understanding before they begin independent practice activities, because they recognize the importance of preventing students from practicing errors. Effective instructional presentations are planned, organized, and delivered to foster complete student understanding and success.

STRATEGY: **Review Prior Skills or Lessons**

Good instruction is based on prior knowledge and experiences. Effective teachers seldom make assumptions about students' previous experiences, even when they have participated in providing them. It is good practice to start an instructional lesson with a review of previously taught information or prerequisite skills.

TACTIC Use clues to stimulate memory

Elem/Sec

Provide students with a variety of clues to recall information from previous lessons that involve prerequisite skills. Clues could include riddles, beginning sounds, pictures drawn on chalkboard or paper or a pantomime of some activity. These clues serve the purpose of getting the students focused on the lesson but also provide the teacher with information about their readiness. For example, a lesson on synonyms could begin by writing the letters "s" and "h" on the chalkboard. The teacher could then pretend to "sock" or "hit" an imaginary object. Ask the students to tell what the teacher was doing by using a word that begins with "s" and then a word that begins with "h".

TACTIC Use games for systematic review

Sec

Play "Ask the Expert" game as a form of lesson review. Identify a student who is an "expert" on previous lesson content. This student goes to the front of the class and the other students ask questions about previous lesson content. Each question that is answered correctly by the expert "scores" $10. When the expert reaches a specified amount or score, the game is over. A panel of "experts" could also be identified so that more than one student could answer questions. The teacher can evaluate prior knowledge not only in terms of answers from the "experts," but also in terms of questions posed by other students.

TACTIC Engage students in review process

Elem/Sec

The teacher makes various statements about the content of previous lessons, some true and some false. All students respond to the statements either with a signal (e.g., thumbs up or thumbs down) or an every-pupil-response card (happy face or sad face; yes or no) to indicate whether the statements are correct or incorrect.

STRATEGY: **Gain Students' Attention**

Attention is required from students for successful completion of many school activities. Nonattention interferes with interpersonal relations and school progress. Effective teachers recognize the importance of student attention to tasks and use strategies to gain students' attention before beginning instruction.

TACTIC Use cues to control attention

Elem

Make a chart that provides students with clear visual reminders of "good listening"; for example, eyes looking, hands and feet still, lips closed, and a head with a light bulb shining inside to indicate thinking about lesson content. At the beginning of each lesson or when students lose attention, refer to the chart and ask students to check themselves to see if they are using all of the strategies. Also provide students with specific feedback about their "good listening" behaviors (e.g., "I see your eyes following along on the chart.").

TACTIC Vary presentation format to gain interest

Elem/Sec

Effective teachers use different presentation styles to keep students interested in their lessons. For example, some begin a lesson with whispering, drawing, or pantomime, or use an unusual prop to gain students' attention. Others act out story problems in math and have students write number equations to solve them. Varied presentation formats can provide a break from a written or verbal presentation style and the novelty will help sustain student interest.

TACTIC Require active responding to sustain attention

Elem/Sec

One of the most effective ways to sustain student interest is by keeping them actively involved in the lesson. Have all students respond by using signals, by selecting and holding in view a response card (yes/no; happy face/sad face; a vowel; a punctuation mark), or by writing their answers on individual chalkboards or magic slates that can be viewed quickly by the teacher.

TACTIC Let students know attention is important

Elem/Sec

Accountability for lesson content helps to assure a high level of attention. Be certain that all students are called upon. Questions that are posed clearly and quickly during lesson delivery are essential for checking student understanding. Communicating to students that everyone will be asked to respond, not just those who volunteer or sit in the front row, prevents students from losing attention.

STRATEGY: **Present Instructional Goals and Importance**

Good instruction is grounded in fundamentally sound educational goals derived from curriculum materials and school district policies. Effective teachers communicate these goals and their importance to their students.

TACTIC Relate objectives to real life

Elem/Sec

Make sure students understand clearly what they will learn from a particular lesson. A clear statement of a lesson objective in terms of student behavior helps them clarify the lesson outcomes. For example, "At the end of this lesson, you should be able to solve quadratic equations. Being able to do this will help you solve problems on standardized tests, like the SAT."

TACTIC Have students solve real-life problems

Elem/Sec

At some point in the lesson presentation, ask students to identify real-life situations in which the lesson skill could be applied, or present a simulated real life situation for them. For example, if you have been learning about arid climates, tell students that they are in the desert and their car breaks down at 1 o'clock in the afternoon. The nearest gas station is 25 miles away, and the next car does not come along until two days later. Tell them to use their knowledge of the desert to decide what they should have packed, how they could survive, and what they might encounter.

TACTIC Indicate why instruction is occurring

Elem/Sec

Cue your students to the goal of instruction. Make sure they understand that activities are a means to an end (i.e., We took a field trip to Sears to learn how they organize merchandise.).

STRATEGY: **Make Lessons Relevant**

Students often complain that much of what they are taught in school is not important in their daily lives. Effective teachers identify the relevance of their instructional lessons and clearly point it out to their students.

TACTIC Use personal information in lessons

Elem/Sec

In presenting math problems, use students' names and situations from their own lives instead of the problems presented in math textbooks. Substitute student names for names of characters in stories and other reading materials.

TACTIC Show students relevance of content

Elem/Sec

Relate the learning of particular lessons to life-long goals and communicate these frequently to students. For example, let students know the relationship between learning individual letter sounds and becoming a good reader and a good speller. Show them how learning to use percents can help them save money at clothing sales. Show them how what they learn in science and health can help them live longer, healthier lives.

TACTIC Use diaries to personalize the learning process

Elem/Sec

Provide a brief period at the end of the day or the end of a lesson for students to draw or write in their "Learning Diary" about something they learned. The personalization of their learning through the process of selecting, planning, and creating for the diary will enhance their personal involvement and make learning more relevant.

STRATEGY: **Maintain Attention**

Sustained attention is required from students for successful completion of many school activities. Nonattention interferes with interpersonal relations and school progress. Effective teachers recognize the importance of student attention to tasks and use strategies to maintain sustained attention during instruction.

TACTIC Actively engage students in lessons

Elem/Sec Ask students to listen for a specific piece of information during a lesson. For example, have them put down a tally mark each time a new vocabulary word or key concept is used.

TACTIC Use response sheets to focus attention

Elem/Sec Give students an outline of the major points of a lesson and have them check each point as it is covered in the lesson. Ask them to identify which items have been covered at a given point in the lesson and which ones have not.

TACTIC Use errors to motivate attention

Elem/Sec Make a deliberate error in a lesson and reward students who recognize it by standing or keeping a tally sheet when they find a mistake. Randomly check students by asking them to tell what the error was and how to correct it.

STRATEGY: **Provide Organized Lessons**

Clear instruction results when information is organized in a coherent manner, when adequate examples are provided, when concrete expression is used, when comprehension is monitored, and when practice is provided to ensure mastery. Effective teachers organize lessons to achieve these goals and ensure student success.

Tactic Use consistent formats

Elem/Sec

Effective teachers use consistent formats when planning their lessons. Even if the plan is not written, they think about the lesson in terms of format. Effective formats include an introduction of the lesson or review, statement of objective, input in the form of modeling or demonstration, checking for understanding, practice with supportive and corrective feedback, independent practice, and summary of lesson.

Tactic Use students to simulate success

Elem/Sec

As part of lesson planning, visualize the most capable student and the least capable student in class responding to the lesson content. Anticipating the needs of each of these students will help ensure that the lesson appropriately addresses individual needs.

Tactic Provide organizational guides

Elem/Sec

Incorporate techniques and materials into lessons that make lesson organization apparent to students. Study guides, lesson outlines, charts, lists of key ideas or words, structured overviews, time lines, and flow charts are examples of such materials or techniques.

For sample activities to increase student comprehension, see Irwin & Baker (1989).

Tactic Use advance organizers

Elem/Sec

Advance organizers are lists of key items or sentences that illustrate the flow of content being presented within a lesson. To make lessons more organized and easily learned, effective teachers assist students by providing links between new information and previously mastered content. They know that all types of advance organizers help students focus their attention and learn better. Sometimes they provide students with focus areas to "key" in on when reading a new passage (e.g., What is the main idea? What happens in the first, second, and final parts of the story? Who are the key characters?). Sometimes they provide models to use during independent practice activities (e.g., mnemonics, songs, or other memory aides).

STRATEGY: **Pace Instruction**

Clear instruction results when information is presented at a pace that keeps students interested and involved. Rates at which students comprehend new information vary, and effective teachers constantly monitor the appropriateness of the pace of their instructional presentations. They also pace instruction to accommodate the instructional needs of their students and ensure learning success.

TACTIC Use questions to aid understanding

Elem/Sec

Pose questions about lesson content at a brisk pace. If a student has difficulty responding, provide sustaining feedback to obtain a correct response, but do not linger too long with one student. Good sustaining feedback provides two or three clues that successively provide more information each time, until the response is fairly apparent.

TACTIC Break complex lessons down into subskills

Elem/Sec

Teach subskills in several short, fast-paced lessons rather than attempting to teach a complex skill in one long lesson. For example, in teaching long division, the first lesson may involve only obtaining the first number in the quotient, the second lesson will review the first lesson and then work on multiplying the quotient and the divisor and subtracting, the third lesson will review the first two lessons and add finding the next number in the quotient, and so on.

TACTIC Anticipate problems

Elem/Sec

Anticipate potential problem areas in a lesson as part of the planning process and be prepared to provide extra examples or opportunities for guided practice. Use previous presentations of similar content for problem areas with particular classes or students.

TACTIC Deal with transgressions quickly

Elem/Sec

If students introduce extraneous information into the lesson, dignify their contribution by quickly informing them of an appropriate time to reintroduce it, but return immediately to the lesson content. The teacher might verbalize, "We'll celebrate your birthday right before lunch, now let's stick to our lesson about _______."

TACTIC Use wait-time effectively

Elem/Sec

Research has shown that teachers frequently move from student to student too quickly during question and answer instructional presentations. Effective teachers are cognizant of the importance of waiting 3-5 seconds for a student response; they monitor their use of this "wait-time" to encourage optimal levels of student response.

STRATEGY: **Interact Positively with Students**

Normal classroom interactions provide ample opportunities for interruptions and student behavior to negatively affect instruction. Effective teachers maintain positive interactions by minimizing effects of classroom interruptions and inappropriate student behaviors.

TACTIC Catch students being good

Elem/Sec

Look for opportunities to praise appropriate behavior early in a lesson, especially for students who are inclined to engage in negative behaviors. Recognizing students early for positive behavior tends to ward off the possibility of having to give them the attention they seem to desire for negative behaviors.

TACTIC Provide proximity praise

Elem/Sec

When negative behaviors initially occur (e.g., playing with objects in desk, trying to kick student in front), immediately praise other students who are engaged in a competing positive behavior and who are sitting near the student who is misbehaving. State the praise in the form of recognition of the positive behavior (e.g., "_______ , your feet and hands are planted. Thanks.") not in the negative form (e.g., "_______ thank you for not kicking the person in front of you.") The latter form gives attention to the negative behavior rather than the desired positive one.

TACTIC Be assertive about being in charge

Elem/Sec

Inform students at the beginning of the school year that you are in charge and that you will handle any behaviors that interfere with good learning. Tell them that at times you might decide that continuing with students who want to learn and ignoring anyone who does not appear to want to learn is the best way to handle a situation. If misbehavior occurs that appears obvious to them but not to you, they need to know that you are aware but you have chosen not to attend. Inform students that at those times, their job is to continue their learning and ignore the misbehavior also. This is a tactic that prevents student attention from reinforcing misbehaviors.

TACTIC Avoid over-verbalizations

Elem/Sec

A good discipline plan should have consequences for misbehavior arranged in a preplanned hierarchy. Misbehaviors should be addressed expeditiously by implementing consequences and returning immediately to lesson content. Nagging or over-verbalizing about a problem behavior consumes valuable learning time and communicates that the misbehavior is more important than positive learning activities.

STRATEGY: **Monitor Performance During Practice**

Feedback is essential in effective instruction. Supportive feedback provides students with information about successful performance, while corrective feedback is provided when a response is incorrect. Effective teachers use independent practice sessions, in which students work on their own, as opportunities to provide supportive or corrective feedback.

TACTIC Maintain high rates of success

Elem/Sec

In providing examples for guided practice (practice under teacher supervision), keep in mind that students should maintain a rate of success between 80% and 90%. A lower rate of success indicates that frustration is an impending problem that will interfere seriously with learning. If students exhibit difficulty, drop back to a lower level of skill. Do not move students to independent practice until success on guided practice is maintained at 90% or better.

TACTIC Reward progress, not just final products

Elem/Sec

Effective teachers spend time monitoring the quality and quantity of work accomplished during independent practice sessions. They know that students are more likely to complete assignments when grades or recognition are provided periodically during a lesson, rather than only when "work is completed." They assign interim grades, and average or sum them for final grades as a way of keeping students' levels of interest high and as a tactic for monitoring progress so that students don't practice errors.

STRATEGY: **Provide Clear Directions**

To be successful in most school activities, students must follow directions that tell them what to do. Effective teachers provide clear directions and focus some of their instruction on teaching students how to follow them.

TACTIC Model expected behavior

Elem/Sec

Modeling provides a concrete, visual example of what either written or orally presented directions mean. Providing a model along with verbalizations will accommodate a variety of learning styles and assists students who might have difficulty following directions because of language or memory problems. For example, a middle school science teacher shows students an example of the "lab report" they are expected to produce as a part of key instructional presentation.

TACTIC Use appropriate levels of language

Elem/Sec

Adjust vocabulary and sentence length to accommodate the needs of all the students in the class. Stating directions in complex sentence form might interfere with a student's performance. For example, say "Circle the nouns. Use each one in a sentence," instead of "After circling the nouns, write a sentence using each one of them."

STRATEGY: **Check Student Understanding**

Effective teachers monitor students' understanding of content presented. They use this information to plan future activities or to modify ongoing presentations, and they strive for high rates of understanding when teaching any content.

TACTIC Use different methods to check understanding

Elem/Sec

Check students' understanding of lesson content using a variety of formats. Ask questions; have them repeat or explain in their own words; use every-pupil-response cards or monitor individual responses on chalkboards, magic slates, or paper; or have them draw or act out.

TACTIC Monitor performance regularly

Elem/Sec

Effective teachers use frequent questions, written work sample analyses, and demonstrations of performance by students as checks on student understanding. They recognize that student needs vary with regard to learning and incorporate a variety of ways of monitoring comprehension in their instructional presentations. For example, if students are learning about metaphors in language arts, an effective teacher might ask students to raise their hands every time they hear a metaphor used in a story, write letters in their journals describing metaphors and giving examples, or prepare a written report of a favorite activity using metaphors in the narrative description.

DELIVERING INSTRUCTION: Present Instruction*

STRATEGY	

TACTIC:

STRATEGY	

TACTIC:

STRATEGY	

TACTIC:

---

* Use this page to add your own tactics.

PRINCIPLE

Teach Thinking Skills

Effective teachers believe that students should be taught more than how to perform skills in a rote, memorized fashion. They know that thinking skills used in completing assignments should be taught through structured instructional presentations. They rely on a variety of techniques when they teach thinking skills.

Effective teachers often model thinking skills. They show students how to do what they expect them to do. They also directly teach fact-finding skills, divergent thinking skills, and learning strategies to their students. They ask students to describe how they are going to solve a problem before actually trying to solve it. They also carefully monitor the ways students solve problems and often teach students to monitor their thinking processes.

STRATEGY: **Model Thinking Skills**

During a typical school day, ample opportunities arise to demonstrate and practice thinking skills. Many teachers verbalize solutions to show students that thinking is part of how they solve problems. Others use classroom peers as models when teaching thinking skills.

TACTIC Think aloud to illustrate problem-solving strategies

Elem/Sec

Modeling of expected behaviors by the teacher should be part of every skill lesson. As part of this modeling process, the teacher should think aloud or describe any covert thought processes that are part of the skill. For example, when teaching writing, the teacher could say, "I have to plan my sentence in my head. I will be able to tell if I have planned it because I should be able to say the whole sentence just the way I want to write it." The teacher should then model the planning process complete with time and appearance appropriate for the thinking that is taking place. This type of modeling will help students realize that no matter how skilled or how old you are, thinking, planning, preparation (e.g., "Am I ready to pay attention? I need to put ideas about recess out of my head.") are not always apparent but still occur and are a necessary part of effective performance.

For examples of "think-alouds," see Sheinker & Sheinker (1989).

TACTIC Provide direct instruction on creating images

Elem/Sec

Mental imagery or visualization are essential processing skills. Provide students with instructional experiences that encourage the use of visualization. For example, tell students to think of two different animals. Then tell them to create a picture in their minds of a new animal that is a combination of the two. Ask the students to describe their animal or answer questions about the animal. Also have them picture an object on a table. Ask them to describe their object. Then tell them to move the object in their minds to a new position. Have them describe where the object is in relation to the table.

TACTIC Minimize effects of being wrong

Sec

Trial and error is part of learning. We learn from our mistakes because they force us to think, reconsider, compare, contrast, and evaluate. Make sure your students observe that you, too, make mistakes and false starts, backtrack, reconsider a course of action, correct, and adjust without worrying about being wrong. A calm, matter-of-fact attitude toward "trying again" models persistence and trial-and-error learning.

STRATEGY: **Teach Fact-finding Skills**

Successful completion of many school-related tasks requires critical thinking and problem-solving. A primary step in this type of thinking is one in which information is gathered as a basis for making decisions. Effective teachers teach fact-finding skills to their

TACTIC Play detective game to teach scanning skills

Sec

Give students a key word or a special picture to look for in a given book or passage. Teach students the skill of scanning—looking quickly in an organized way from top to bottom and from left to right. The student or team that finds the key word or picture first scores a point.

TACTIC Practice applications of study skills

Sec

When using textbooks, do not always give the page number of the assigned work. Instead, show them the title of a story or assignment, and have them locate that title in the Table of Contents to find the page number themselves. At this level the students are required only to match the title to locate the work. To make the task more difficult, only topic information could be provided and a title that relates to the topic would have to be found.

TACTIC Underline answers to focus attention

Elem/Sec

Provide students with a single sentence or brief paragraph that provides specific information (e.g., John ran to school after he ate his breakfast.). Ask students to underline just the words in the sentence that answer a specific question (e.g., When did John run to school? or Where did John run?). By providing simple sentences that are read orally as well as written, even young students or students with significant reading deficits can participate in activities such as this.

TACTIC Have students do research

Elem/Sec

Helping children with research projects, asking probing questions of visitors who are giving special demonstrations or talks, preparing for field trips, musing or thinking aloud, using the dictionary or encyclopedia to find answers, and using the library all demonstrate to children how adults question and explore.

TACTIC Use activities to develop inferential thinking skills

Elem/Sec

Help develop scientific process skills with the following activity. Set up a slide projector in your classroom. Choose a color slide to project on the wall and show the picture badly out of focus. Ask students to infer what the picture might be. What observations led them to draw these conclusions? Then, focus the picture slightly and invite students to share what new evidence they've gathered. Encourage your students to evaluate their original inferences. Continue focusing the picture until it is clear. Have your students compare their original inferences with the picture.

STRATEGY: **Teach Fact-finding Skills**

TACTIC Use real-life situations for reference

Elem/Sec

For homework, assign tasks that will help your students think of potential sources of information to solve a problem. For instance, if a student notices a new flower on the playground that no other student can identify, assign the task of finding out the flower's name for homework. Have students who bring in the flower's name the next day discuss how they went about finding the answer.

STRATEGY: **Teach Divergent Thinking**

Successful students learn to generalize by expanding information and basic facts using divergent thinking skills. Effective teachers have students practice providing different answers by comparing and contrasting solutions to problems and asking questions that require more than simple recall of facts.

TACTIC Discuss similarities and differences using student-constructed objects

Elem/Sec

Give each student an identical set of building materials such as pattern blocks, unifix cubes, wooden blocks, or interlocking toys. Allow a specific amount of time for the students to construct something using their own materials. They should be encouraged to use as many of their materials as possible. At the end of the time limit, have each student tell about his/her construction. Discuss how the constructions are alike and different.

TACTIC Provide opportunities for making predictions

Elem/Sec

Have students judge a book by its cover. Before reading a book to students at storytime, have them look at the picture on the cover and brainstorm a list of ideas that suggest what the content of the book might be. Also, students could generate a list of questions that they think might be answered by reading the book. For older students, provide the title, and after reading the story, discuss impressions of what the author was trying to convey.

For sample teacher-student dialogues concerning predicting what will happen in a story, see Gaskins & Elliott (1991).

TACTIC Provide opportunities for students to modify materials

Elem/Sec

Have students rewrite a story. After reading a story, have students change some part of the story and reread it with the revision. For example, male characters could be changed to female and vice versa, settings could be changed, emotional responses could be changed. Students could discuss what effect the changes had on the story. For example, is it still believable or is it silly? This same activity could be applied to word problems in math.

TACTIC Use problems to teach thinking skills

Elem/Sec

Have students examine a given resolution to a problem by analyzing positive and negative outcomes of it. Have them generate at least one other solution and analyze its outcomes as well.

STRATEGY: **Teach Divergent Thinking**

TACTIC Provide opportunities to generate different applications for materials

Elem/Sec Give students a geometric shape and have them generate a list of objects that could be formed from it. Select some of the objects (e.g., most unusual, most practical) and have the class generate reactions to them. Group the reactions under appropriate categories (e.g., positive and negative) and have students reconsider the "value" of the object after reviewing reactions to it. Have the class discuss ways to improve the object based on reactions to it.

TACTIC Provide opportunities to predict outcomes

Elem/Sec Give students a picture or sequence of pictures (e.g., parts of a cartoon story) and have them respond to questions that require divergent, inferential responses (e.g., What will happen next? What happened before?). Have them read text after making predictions to confirm or disconfirm their hypotheses.

TACTIC Provide opportunities to generate stories

Elem/Sec Read a familiar short story (e.g., Little Red Riding Hood) to the class and have students prepare alternative stories from the point of view of characters other than the central one (e.g., Wolf's version of the familiar fairy tale).

TACTIC Have students generate new products

Elem/Sec Give students a list of the characteristics and main parts of a familiar product (e.g., a toaster) and have them create new products using this information. Group the products into categories (e.g., home use, business opportunities, leisure use) and discuss the potential present and future need for each.

STRATEGY: **Teach Learning Strategies**

A learning strategy is a step-by-step procedure that can be used to learn academic content or solve academic problems. Effective teachers teach steps in learning strategies using direct instructional techniques. They use learning strategies to help students complete different types of academic tasks.

TACTIC Teach study strategies

Elem/Sec

Don't assume that when students are assigned reading words to study, spelling words to learn, or math facts to memorize that they have studying strategies at their disposal. As part of preparation for the assignment, specific steps for studying should be modeled and practiced. Have students work in pairs to practice.

Steps for four study strategies—skimming, summarizing, notetaking, and outlining—are provided in Sheinker & Sheinker (1989).

TACTIC Provide charts that cue strategies

Elem/Sec

Display charts in the classroom that cue students to apply strategies effectively. For example, if students have difficulty memorizing math facts and are taught to use a "counting on" strategy to obtain the answer, two pictures that cue the difference between applying the strategy to addition (fingers up) and subtraction (fingers down) could be displayed. Reminding students to look at the charts before beginning a worksheet will help them focus on the correct application of the strategy.

TACTIC Teach strategies with wide applicability

Elem

When planning a teaching learning strategy, develop steps and language that will allow for the widest applicability of the strategy. For example, in teaching students to decode consonant-vowel-consonant with a silent "e" (CVCe) word patterns, even though your lesson may involve only one long vowel sound (only long "a" words, if necessary), do not say, "The e on the end makes the a long." Instead, the following verbalization of the strategy allows for a broader application: "See an e on the end? It makes this vowel long. (Point to first vowel.) So what sound?" This verbalization will allow the use of one or two special vowels in a lesson, if necessary, but the strategy will not need to be retaught for the addition of each new vowel sound.

STRATEGY: **Teach Students to Monitor their Thinking**

Many effective teachers have students use self-questioning to improve their performance on academic tasks and other school-related chores. Students in these classes learn to talk to themselves in productive ways and generalize these skills to learning outside school.

TACTIC Provide students with checklists to refresh skills

Elem/Sec

Prior to beginning guided or independent practice on a particular skill, have students review a checklist of steps or critical aspects of the skill. In a writing assignment, the checklist could include such items as "capitalize first words, mark at end, sounds like talking, use correct endings on action words, etc." In a math exercise involving subtraction of two-digit numbers, the checklist could say "start at ones; ask, 'Is the bottom number bigger?'; Yes, regroup; No, subtract. After the students have completed their work, they can be asked to self-check it using the lists or charts.

TACTIC Develop awareness of effort level

Elem/Sec

Have students predict the number of correct responses they think they can make on a given assignment as well as whether they think the task will be easy or hard. Have students compare their predictions with actual performance and discuss any discrepancies that occur. For example, if a student predicts that all items will be correct and that the task will be easy, but scores less than half correct, this discrepancy could indicate a careless and rapid approach to a task that needed a more careful, deliberate strategy.

TACTIC Reinforce use of self-talk

Elem/Sec

During guided practice, encourage students to use self-talk aloud and reinforce such behaviors: "Good, you reminded yourself of step 2."

TACTIC Focus on answers other than stated facts

Elem/Sec

Consistently ask your students questions that will help them think about their learning. For example, What is your opinion? What resources were helpful to you in your research? What did you learn from one book that you didn't learn from another? How did you recognize that you had learned something new? Students can share information orally or keep journals in which they document their reactions to instruction, how they gather information, and alternative information sources available to them.

DELIVERING INSTRUCTION: Teach Thinking Skills*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

PRINCIPLE

Motivate Students

Effective learning requires that students' interest and attention are focused on the instructional activities at hand. Most teachers recognize that people learn better when they are motivated and they use the following strategies to motivate students. They show enthusiasm and interest, help students understand the importance of their work, use extrinsic rewards effectively, account for the student's level of skills and interest, and teach students to believe that they can do their work.

STRATEGY: **Show Enthusiasm and Interest**

Students learn best when teachers are enthusiastic about the content of their instruction. To show their interest, effective teachers communicate the importance of what they are teaching; they let students know how the content will help them and that they expect them to be successful in learning it.

TACTIC Collect and evaluate performance data

Elem/Sec

Determine objectives for teaching units (skills or concepts) and administer a short pretest to determine the student's level of skill. At the end of the teaching unit, administer a post-test. Encourage students to chart their performance using a green pencil for speed and a red pencil for accuracy. The change in performance that should be apparent not only serves as a useful tool to show students that they are learning, but also communicates to the teacher that effective teaching has occurred. Teaching and learning success tends to increase enthusiasm and motivation for future teaching and learning experiences.

TACTIC Communicate clear expectations and goals

Elem/Sec

At the beginning of each lesson, state the objectives of the lesson in terms of student expectations and outcomes (e.g., "At the end of this lesson you will be able to subtract numbers with tens and ones that have to be regrouped.").

TACTIC Intersperse drill and practice with novelty

Elem

As students are learning to tell time, break up the routine of practice worksheets with a clock treasure hunt. Students have a "map" (worksheet) with treasure chests with specific times written on them (12:00, 4:30, etc.). Hide clocks around the classroom that show times indicated on each treasure chest. Put a letter on each clock. When students find a clock that matches the time on a treasure chest, they write the letter on the clock inside the treasure chest. When each treasure chest has a letter, they have completed the treasure hunt. Their success can be checked against the teacher's "master treasure map." For added interest, hide clocks with times that are not included on the treasure chest "map."

TACTIC Be dramatic

Elem

Use a bit of drama in delivering lessons. For example, in teaching the students about the effects of a final e on the first vowel in consonant-vowel-consonant with a silent "e" (CVCe) word patterns, portray the effect of adding the e and changing the vowel from short sound to long sound as a magic trick. Make a top hat, wear a cape, glue on a paper mustache, carry a "wand" pencil and be "Magic Sam, the Magician" for the duration of the lesson as you add the final e and change CVC words to CVCe words. As the students do guided practice, let them wear the props and become the magician.

STRATEGY: **Help Students Understand Importance of School Work**

Effective teachers provide ample and appropriate reasons for the assignments and activities they schedule. They know that students are more likely to complete school work when they know and understand why it was assigned and how it relates to past and future learning.

TACTIC Relate practice to improved performance

Elem/Sec

Frequently collect data about skill performance and display in a graphic form (number of correct words, number of correct math problems, number of correct words per minute in passage reading, number of words spelled correctly, etc.). Have students practice a specific skill and collect performance data. When data displayed on the graph show performance improvement, emphasize the relationship between the improvement and the practice sessions.

TACTIC Use public posting to reward improved performance

Elem/Sec

Instead of displaying only papers that have 100% accuracy, make a bulletin board for "Students Who Are Improving!" Have students practice assigned skills and frequently give them performance checks (tests). Place student's name on a star and add to the bulletin board each time performance improves.

TACTIC Use tests as advance organizers

Elem/Sec

Some teachers find that administering chapter tests before covering some instructional content helps students identify important aspects of content being covered. These teachers use information obtained from the tests as illustrations of what is not known and discuss with the students reasons this information is important for mastery.

TACTIC Use integrated units to illustrate importance

Elem/Sec

Most effective teachers use two different types of instructional units. **Independent units** focus on specific content or a single subject area (e.g., literature unit on mysteries). **Integrated units** focus on interdisciplinary aspects of a topic (e.g., unit on cooking that includes reading new vocabulary words, writing recipes, and using math for measuring, predicting, and solving word problems). Using integrated units illustrates the importance of learning specific content because how the information is used is part of a broader instructional presentation that illustrates application and extension to real-life use.

STRATEGY: **Help Students Understand Importance of School Work**

TACTIC **Relate school work to student aspirations**

Elem/Sec

Before or after completing an instructional unit, have each student identify an occupation or future professional goal. Discuss ways that current instructional topics relate to each occupation. Similarly, importance of a particular skill can be illustrated by relating it to something students like to do. For example, reading charts relates to watching television, reading television schedules, and rating television shows; map skills are important for planning trips, saving time, and winning races. Have students relate the relevance of content to their own personal needs and aspirations.

STRATEGY: **Use Extrinsic Rewards Effectively**

Rewards are something positive that students receive in return for accomplishments. Many students need these incentives to help them comply with rules, complete assignments, and follow procedures. Effective teachers use different types of rewards to encourage the best efforts from their students.

TACTIC Make a list of available rewards

Elem

To assure availability of a variety of rewards in the classroom, develop a reward list that is appropriate for your classroom. Include such items as verbalizations ("Way to go, Peaches and Cream!"), signals and gestures (winks, thumbs up), special privileges (pass out the papers, close the door, be line leader), physical contact (handshakes, pats on back), information to parents (Happy Grams, Award Certificates, Good Notes), tangibles (stickers, food treats—small souffle cups filled with an appealing cereal, for example), special activities (cooking lesson, special game) and believe it or not, extra worksheets (keep a file handy). Selection of appropriate rewards from the list can be made based on student needs and type of tasks.

TACTIC Use a reward drawing box

Elem/Sec

To vary the type of rewards delivered for behavioral or academic skills, write the names of several different possible rewards on small cards and place them in a box. When students earn a reward, let them draw a card from the box to determine the type of reward they will receive. Including a range of rewards from tangibles to pats on the back to verbalizations will allow this reward drawing to help students make a transition from the use of tangible rewards to social rewards such as praise. The ratio of cards included in the box can be varied dependent on student need and level—3 treat cards, 1 hug card, and 1 thumbs up card; 3 freetime cards, 1 fast-food coupon, and 1 no homework card.

TACTIC Characterize rewards as "Earned" not "Given"

Elem/Sec

When establishing a system of extrinsic rewards, be certain to clarify to the students that they "earn" the rewards with their behavioral or academic performance and they are not just "given." When delivering the reward, ask students to tell you what they did to earn the reward. Emphasis on "earning power" prevents students from making an erroneous assumption that someone who is getting a lot of rewards for good performance is doing so because the teacher likes them better.

STRATEGY: **Account for Level and Student Interest**

Even under the best conditions, some students may not be ready or willing to complete an assigned task. Sometimes they are "bored" by work they consider to be inappropriate. Effective teachers take into account these differences in level of motivation and student interest when they are delivering instructional presentations.

TACTIC Be flexible

Elem/Sec

Be prepared to allow some flexibility in assignments. Sometimes a student's refusal to complete an assigned task is related to his/her own anxiety or stress about the work. He/she may believe that the problems are too hard or that there are too many. Additionally, he/she may not always be willing or able to clarify his/her concerns. A flexible teacher can adjust assignments. Offer a buddy to help with the first two rows, cut the paper in half and assign half for classwork and the other half for homework, change the assignment (today, only circle the problems that will need regrouping instead of actually working them).

TACTIC Offer choices

Elem/Sec

Sometimes students' resistance to an assigned task can be thwarted by making them feel more involved in making decisions about their work. This can be accomplished by offering choices. Ask,

- "Do you want to use regular pencils or colored pencils to complete this worksheet?"
- "Do you want to do this work at your desk or at the table?"
- "Do you want me to help you with the first two problems or just the first one?"
- "Do you want to read this story into the tape recorder or to a friend?"

Notice that the choices are equally desirable from the standpoint of the teacher—either will get the job done.

TACTIC Create challenges

Elem/Sec

If students appear to be "bored" or tired of a particular task but still need to practice to achieve their mastery level, add an element of challenge to the task. Ways of creating challenges can include asking them to complete a certain number of problems without a mistake (if they are at an acquisition stage of skill development) or in a given time period (if they are at a fluency stage). Challenges are best when they ask the child to compete with his own record or with a given standard, rather than with other students.

STRATEGY: **Help Students Believe they Can Do their Work**

Teachers can make a difference in helping students believe they can perform appropriate academic tasks at high rates of accuracy. When students resist assignments, effective teachers keep them actively involved by modifying assignments, encouraging participation, and recognizing individual skills, abilities, and motivation.

TACTIC Let students praise themselves

Elem

Collect data for student performance on a particular skill (i.e., number of problems completed correctly, number of words read in one minute, number of correct words read per minute for a passage) and graph the data. Ask the students to interpret the graph by asking which direction the line is going. When students indicate that the line is going up, ask them to tell you what that means. Previous experiences should prompt them to say, "I'm getting better!"

TACTIC Offer praise for varying amounts of work

Elem/Sec

If students are reluctant to complete a task because they are unsure of their ability to be successful, have them do only one problem and offer praise immediately. Gradually increase the number of problems that must be completed before delivering praise. Be careful not to praise only finished products.

TACTIC Allow students to select from a collection of tasks

Elem/Sec

If students are reluctant to complete a task because they are unsure of their ability to be successful, have them select an assignment from a set of appropriate ones; have them complete it or come up with an alternative. Carefully monitor the types and amounts of work completed when students direct their own learning.

TACTIC Have students negotiate completion rates

Elem/Sec

Intentionally provide students with longer assignments than necessary and have them identify an appropriate amount of work to be completed during independent practice sessions. Offer incentives for successful completion of the assignment (e.g., First ten correct is acceptable, any incorrect and complete assignment must be finished for homework).

STRATEGY: **Help Students Believe they Can Do their Work**

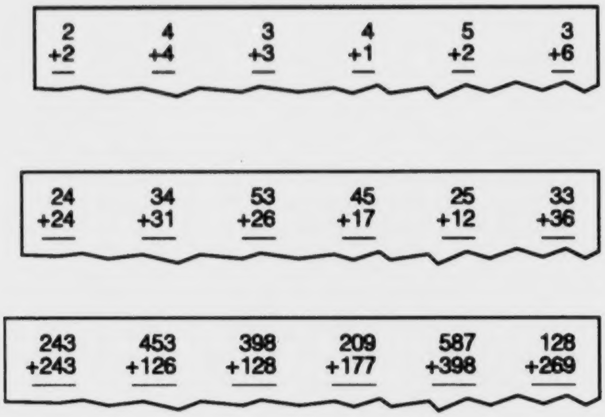
TACTIC Provide ample opportunities for individual progress

Elem/Sec

Students begin instruction at various levels of skill development and knowledge. Effective teachers provide multiple levels of independent practice assignments to accommodate these individual differences and ensure academic success for their students. For example, having students complete worksheets comprised of sets of any of the following types of problems requires the same skills (Figure 14).

FIGURE 14

Example of Lessons Using Same Skills— Different Ability Levels



2 +2	4 +4	3 +3	4 +1	5 +2	3 +6
24 +24	34 +31	53 +26	45 +17	25 +12	33 +36
243 +243	453 +126	398 +128	209 +177	587 +398	128 +269

DELIVERING INSTRUCTION: Motivate Students*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

PRINCIPLE

Provide Feedback

Instructional feedback refers to providing quick, appropriate information to students about how they are doing on classroom tasks and activities. Effective teachers use the following strategies when providing feedback: give immediate, frequent, explicit feedback; provide task-specific praise and encouragement; use reexplanation to improve performance; model correct performance; and provide prompts and cues. Effective teachers provide feedback in different ways, such as question/answer exchanges with students, checking papers in class during instructional presentations, or spot checking work as they circulate around their classrooms. They maintain an atmosphere of openness and support when providing feedback and strive to minimize the extent to which their responses to student work are viewed purely as judgments.

STRATEGY: **Give Immediate, Frequent, Explicit Feedback**

Most students enjoy recognition for successful performance. Effective teachers provide supportive and corrective feedback while teaching. **Supportive** feedback lets students know that what they did was done correctly; it provides support. **Corrective** feedback lets them know that what they did was done incorrectly and provides correction.

TACTIC Dignify student responses

Elem/Sec

Although students need corrective feedback for wrong responses, a teacher can dignify the very act of responding by the type of statement he or she makes prior to correcting the error. Some examples are, "I can tell you are thinking about the lesson, but let me help you correct your answer," or "Thank you for trying but the right answer is . . . ." An abrupt "No, that's not right!" may cause the student to stop giving any responses.

TACTIC Use variety when providing feedback

Elem/Sec

Avoid overuse of statements like "Good," "Right," or "OK." Vary supportive feedback with statements such as "Way to go," "Perfect," "Right on target," "Correct answer," and use gestures to communicate correctness. A wink or a thumbs up lets students know they have responded correctly.

TACTIC Prevent students from practicing errors

Elem

It is apparent that practice improves performance for desirable skills, but unfortunately, practice also strengthens error responses. If students make an error that appears to be due to an incorrect association, correct the error immediately. Then provide a prompt or cue to assure that when the response is called for again, the correct response occurs and the error is not practiced. This situation often occurs in reading, when students confuse similar words such as "and" and "said." Prompting these words with a beginning sound clue can prevent the student from continuing to make errors on discrimination of the word. Gradually fade out prompts as success is achieved.

TACTIC Systematically return to responses

Elem/Sec

When students make an error on a response, correct the error and systematically call for that same response until success occurs consistently. A systematic plan could involve returning to the response after one different intervening request, then returning after two different intervening requests, then after three, etc. Gradually lengthening the time and increasing the amount of intervening information before the return will assure that the response has been corrected. For example, if students are recalling math facts and an error is made, give the correct answer, then go to the next fact, return to the fact that was missed, then do the next two facts, and return to the original fact. Continue to increase the number of intervening facts practiced prior to returning to the original fact. If an error recurs on the same fact at some point during this systematic return process, correct the error again and drop back to the beginning of the systematic plan.

STRATEGY: **Give Immediate, Frequent, Explicit Feedback**

TACTIC Check first responses on independent practice

Elem/Sec

When students begin independent practice, have them complete the first item; immediately check all responses. Have them do a second one and again immediately check all responses. At this point, students who were correct on the first two items can continue on their own with some assurance that they will be successful. More guided practice can be provided for students who made errors. This strategy prevents students from practicing errors on several problems before receiving corrective feedback.

STRATEGY: **Provide Task-specific Praise and Encouragement**

Positive responses to work or behavior that go beyond simple affirmation or feedback are called praise. Most students like receiving praise and although they seldom use it as a reinforcement technique, effective teachers frequently praise their students.

TACTIC Keep track of segments of work, not just final products

Elem/Sec

Effective teachers divide complex tasks into smaller units and provide tangible rewards or verbal praise for completion of component parts of longer assignments. Students enjoy collecting these intermediate rewards and exchanging them for "grand prizes" when assignments are completed.

TACTIC Focus on specific task or skill demonstrated

Elem/Sec

Effective teachers focus feedback on what was done, not simply on the fact that assignments are completed. For example, telling a student that completing an independent worksheet demonstrates skill in adding two-digit numbers is better than simply rewarding completion of the work (e.g., "I'm glad you are done. You did a good job.").

TACTIC Send evidence of good work home

Elem

Have students take checked assignments home on a regular basis. Send them home in a folder or large envelope that indicates what the student has mastered (e.g., SUPER TWO-DIGIT MULTIPLICATION) rather than simply providing generic information about the work (e.g., GOOD WORK!!). Periodically have parents sign and return the "good work" folder as an additional way of motivating students to complete their work.

STRATEGY: **Use Reexplanation to Improve Performance**

Effective teachers use feedback that lets students know that what they did was not what was expected. They provide an opportunity to correct the performance after a reexplanation of the target behavior (e.g., "No, this is how we use regrouping during subtraction . . . ").

TACTIC Reassure students about errors

Elem/Sec

Reassure students that making errors is a natural part of learning new ideas and skills. Such reassurance will help to keep students from overreacting to errors with disappointment or anger, and will allow them to be more responsive to the correction and practice.

TACTIC Provide prompts to assure success

Elem

During error correction provide the student with any necessary prompts or cues to assure initial success. Pointing, verbal cues, and physical guidance are examples of prompts or cues. When success is being maintained at a high rate, gradually fade the prompts.

STRATEGY: **Model Correct Performance**

Effective instruction begins with a demonstration or explanation of expected behavior. Effective teachers show students as part of their instructional presentations what they are expected to do. Student demonstrations during instruction provide opportunities for supportive or corrective feedback.

TACTIC Display lesson materials during modeling

Elem/Sec

If a lesson involves a worksheet or printed materials, display those materials on the chalkboard with a clip or tape and work problems on the worksheet as students watch. The number of problems completed during modeling will depend on the needs of the students. Sometimes a whole worksheet can be modeled, removed, and given to a student for independent practice. If manipulatives are involved in the lesson, display those materials so that all students can see them, and again model their use in front of the students before asking them to use them on their own.

TACTIC Use overhead projector for modeling

Elem/Sec

An overhead projector is an excellent tool for modeling. Worksheets can be made into transparencies, handwriting models can be projected, pictures can be drawn, and even some manipulative objects can be placed on the surface and their shapes projected onto the wall. In addition to being able to project a variety of materials, the overhead projector allows the teacher to model tasks while facing the students.

STRATEGY: **Provide Prompts and Cues**

Even under the best of conditions, some students need help identifying what constitutes an expected performance. Many teachers plan for this by using different types of visual, verbal, and physical prompts or cues during their instructional presentations.

TACTIC Prompt correct responses with associated signals

Elem

If a student is having difficulty remembering a word, say the word repeatedly, each time tapping the desk with a pencil. As the student reads along in the passage, when he/she comes to the difficult word, tap the desk with the pencil to prompt the correct response and prevent an error from occurring. Hand claps, finger snaps, foot stomps, or other movements can become associated signals.

TACTIC Offer a variety of prompts

Elem

Words can be prompted by offering beginning sound clues, rhyming words, and short definitions. Answers can be prompted by providing incomplete sentences (e.g., George Washington was the first _______.). Math operations can be prompted with physical gestures, (e.g., sweeping circular hand motion that appears to enclose a set could be used to denote addition) while a sweeping motion that pushes away from the body could prompt subtraction.

DELIVERING INSTRUCTION: Provide Feedback*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

PRINCIPLE

Provide Relevant Practice

A commonly overlooked principle of effective instruction is the provision of appropriate or relevant practice. Practice often takes the form of independent activities after lecture presentations. Students need to have their work checked during independent practice sessions because they often practice errors when they have misunderstood the content provided during an instructional presentation. In general, three types of practice are used: illustrative, comparative, and predictive. In **illustrative** practice, exactly the same behaviors taught during the instructional lesson are the target of practice activities. For example, if the students are learning to do two-digit addition, an illustrative practice activity would be to complete a two-digit addition worksheet. In **comparative** practice, the behaviors taught during an instructional lesson are practiced in alternative media. For example, if students are learning the parts of the body in science, a comparative practice activity would be to color different body parts on a worksheet rather than to simply label them or provide definitions. In **predictive** practice, the behaviors taught during an instructional lesson are selected from among other alternatives as appropriate for a task. Students demonstrate that they know when to use behavior taught in an instructional activity during predictive practice activities. The type of practice selected will vary with the overall goal of the instructional unit; however, some basic strategies are useful in making any form of practice relevant. These include helping students develop automaticity of newly learned skills, providing sufficient opportunity for practice, using seatwork effectively, providing students with help, using relevant tasks and varied materials, assigning the right amount of work, and varying methods used by students to practice new skills or master new content.

STRATEGY: **Develop Automaticity**

A goal of most instruction is having students demonstrate on demand the skill that is being taught. This means that they can give the correct answer or response in a reasonable amount of time after it is requested. Effective teachers have automaticity as a goal of their instruction.

TACTIC Use repeated readings for improvements

Elem/Sec

Often there is a perception that once material has been read, it is boring to read it again. However, if fluency is a reading goal, students must practice rereading stories. One way to achieve this goal is to collect information on the number of correct words read per minute for either a whole story or a part if it is extremely long. Graph the information and then have students reread the same passage until at least three improvements have been made on the number of correct words per minute. The graphic feedback as well as the challenge of self-improvements will have students begging to read the story again.

TACTIC Be aware of learning stages

Elem/Sec

When developing automaticity, be aware of the student's learning stage. Students who are at an acquisition stage (just acquiring the skill) need to practice for accuracy. Students who have achieved a high level of consistent accuracy are ready to move to a proficiency stage, which means that rate and accuracy must be combined. At this point, students should practice to meet a criterion that specifies a given number correct per minute or any appropriate time unit.

STRATEGY: **Provide Sufficient Opportunity for Practice**

Professional tennis players practice 5-6 hours a day. Most athletes know that practice is an important part of their overall training program. Students learning new skills or improving skills that they have learned need opportunities to practice under supervision.

TACTIC Use one-minute timings for practice

Elem

To develop rapid recall, students should practice for short periods of time each day. An effective way to do this is to periodically take one-minute samples of the behaviors. For example, at least once a day, require students to do as many math facts as they can in one minute. Or have them write as many of the weekly spelling words as they can remember during a one-minute "time trial." Recording daily performances and noting changes in productivity after each week will be very motivating to some students.

TACTIC Use lotteries to improve performance

Elem/Sec

Periodically during the day, ask students to solve a math problem or write a spelling word on one side of a 3 x 5 inch piece of paper. Have them write their names and the date on the other side. Take their "tickets" and put them into a shoebox. Just before the students leave for the day, select several of the sheets and award prizes to students who have correctly spelled their names, recorded the correct date, and accurately completed the task that enabled them to enter the lottery.

TACTIC Play games to improve performance

Elem/Sec

Some students thrive on competition. These children enjoy working to improve their own performance relative to timed standards they have set. This need for competition can be used to improve automaticity. Have the students record the amount of time it takes to complete a worksheet (e.g., 25 two-digit addition problems with regrouping). At the next practice session, have them try to beat their previous time. Some of the students will want to "set a world's record" for their sheets. Such high rates of responding are an excellent benchmark to use in judging automaticity.

TACTIC Set minimum daily requirements for practice

Elem/Sec

Many students avoid practice because they don't know how much or how often to do it. It is helpful to indicate how much you think your students should be practicing the material you are teaching. Before each lesson, give students an estimate of how difficult you think the work will be for them and how much time you think they will need to practice during school and at home.

STRATEGY: **Provide Sufficient Opportunity for Practice**

TACTIC Set different standards for different tasks

Elem/Sec

When students are just learning a new skill. they should practice it more than when the practice sessions are part of review. Effective teachers like to see students practicing new skills at least 15 minutes a day at 80-90% accuracy. Less than 5 minutes is usually sufficient time to review performance of a skill that has been acquired; this performance should be above 90% in accuracy. Some teachers define mastery as 100% correct after indications of errors are provided with immediate feedback.

TACTIC Include practice as part of daily schedule

Elem/Sec

Daily classroom schedules include instructional times for content and skill subjects. However, to assure that adequate time is provided for students to practice previously learned skills, a brief (approximately 10 minutes) practice time for skill subjects could be listed on the schedule. Practice plans to assure that students retain their skill levels could be implemented during these designated practice periods and would not interfere with other instruction.

TACTIC Assign a practice buddy

Elem/Sec

Have students keep a card box that includes skills requiring practice, such as words to read, words to spell, math facts to learn, historical dates to remember, or science facts to memorize. Assign a practice buddy to each student. The practice buddy can monitor a student's performance or assist the student during designated practice times.

TACTIC Establish plan to help students retain skills

Elem/Sec

Frequently, students engage in practice activities until a new skill is mastered. Then instruction moves to new skills without accounting for the need for spaced practice to assure that previously taught skills are maintained. When introducing a new skill, develop a long range plan. For example, a plan for practice for maintenance of two-digit subtraction with regrouping could be

- daily practice to 95% accuracy,
- daily practice to 12 correct problems per minute,
- practice 3 times per week as long as 95% average is maintained,
- practice 1 time per week with 95% average,
- practice 1 time every two weeks with 95% average, and/or
- practice 2 times per month with 95% average.

If students drop below the established criterion on practice for maintenance, return to a previous step in the maintenance plan that provides more frequent practice. Making a chart to record maintenance performance also could help track a student's progress.

STRATEGY: **Use Seatwork Effectively**

Independent seatwork primarily provides opportunities for students to consolidate or apply prior knowledge and learning rather than to learn new content. Effective teachers allocate moderate amounts of time (less than 20 minutes) to seatwork and use it to check levels of student understanding to identify areas for reteaching content.

TACTIC Organize seatwork options by objectives

Elem

Maintaining a filing system organized by instructional objectives allows easy access to appropriate practice materials. For example, files that are labeled "Two-Digit Subtraction with Regrouping," "Preprimer Level Sight Words," or "Decoding CVC Word Patterns" will facilitate quick storage and access of practice materials related to those objectives and will enhance a teacher's ability to individualize seatwork.

TACTIC Check seatwork assignments for content validity

Elem

Make sure a worksheet that is designed to provide practice on a specific skill actually requires the student to practice the designated skill. For example, if a student is to learn to apply syllabication skills to decoding unknown words, be wary of worksheet directions that say, "Read the word and then divide it into syllables." If a student can already read the word, he or she certainly is not practicing the skill of using syllabication to decode.

TACTIC Provide tools for independent work

Elem

Effective teachers have a variety of resources available for students to use during independent instructional sessions or group lessons. For example, they provide students with individualized dictionaries that include commonly misspelled words, common abbreviations (e.g., states), and other useful words (e.g., homophones), or they have students produce their own. They have plenty of math manipulatives available for students to use when doing simple and complex arithmetic. They have card files readily available with grammatic and punctuation rules illustrated for use in writing assignments. They encourage students to use similar materials when working on assignments at home.

TACTIC Banish busywork from busy schedules

Elem

Periodically ask students to verbalize the reasons they are doing seatwork and independent assignments. If the reasons don't fit with context of the lessons, consider modifying the instructional presentation.

STRATEGY: **Provide Help for Students**

A goal of independent practice is high rates of accurate responding. Effective teachers want to avoid having students practice errors when they are engaged in independent practice. They provide feedback quickly and directly to maintain student involvement during independent work sessions.

TACTIC Use signals for students to request help

Elem/Sec

Develop a signal for each student to use when assistance is needed during an independent practice session. Circulate through the room when students are practicing and look for signs that someone needs help. Provide help as quickly as possible so that students can continue to work.

TACTIC Use alternative instructions

Elem/Sec

Students sometimes have trouble during independent practice because they have not understood or have forgotten what they are to do. When a student indicates that he doesn't know what to do, don't simply restate the directions. Have an alternative description ready and use it the first time someone asks for help with what he is supposed to do.

STRATEGY: **Use Relevant Tasks and Varied Materials**

Few students enjoy practicing many school-related activities. Effective teachers recognize and consider this when delivering instruction. They assign relevant tasks (i.e., those with direct relation to academic content being presented) and increase interest in independent practice by varying the types of materials they use.

TACTIC Use games, printed materials, and audiovisuals

Elem/Sec

Practicing skills does not always have to be done through worksheets. Students can play board games, bingo games, action games; they can read into a tape recorder; they can type, write on an overhead transparency, write in salt or on a chalkboard; they can use a handheld tachistoscope or flash cards; they can give responses for a custom-made filmstrip; they can clip answers with clothespins or form answers with clay. Having a variety of options for students to choose from will increase the possibility that students will practice.

TACTIC Create and use open-skill worksheets

Elem/Sec

Design attractive and motivational worksheets that have open pictures where different skills can be inserted for practice as needed. For example, "Pick The Apples" can be a picture of tree with blank apples drawn on it. Math facts, scrambled words, synonyms, pictures, or any skill that students need to practice can be drawn on the apples. Ideas for the open formats can be drawn from students' interest level (e.g., jumping ramps with skateboards; putting tires on, or off, cars; catching fish; buying clothes).

TACTIC Use readily available manipulatives

Elem

Manipulatives for teaching math skills can be obtained from readily available materials such as lids, buttons, beans, corks, rocks, birthday candles, screws, or old keys. The novelty of the materials may increase students' interest in the tasks.

STRATEGY: **Assign the Right Amount of Work**

Many students are overwhelmed by what they perceive as large amounts of work during practice work sessions. Effective teachers try to come up with the right amount of work for each student.

TACTIC Have students set their own standards

Elem/Sec

Keep track of the amount of work each student completes during an independent practice session. On the next day, make assignments based on the previous day's performance. Have some students do more than they did the day before and have some students do less.

TACTIC Have students increase work slowly

Elem/Sec

Each successive day of practice, require slight improvements in amount and accuracy from your students. Request one more problem completed or one more problem done correctly on each day until the final criterion for mastery has been reached.

TACTIC Break practice into different phases

Elem

Set three different time periods within an independent practice session. During the first five minutes, have students "get ready" to work; they should identify what they need to do, have all necessary materials, and know how long they are expected to work. During the next phase, have students work on independent assignments; a teacher or peer should be available to provide corrective and supportive feedback. The length of time for this phase will vary with the type of assignment and each student's previous experience with it. During the last phase of independent practice sessions, have students record their performance and make decisions about subsequent assignments or homework. Of course, many students are "self-starters" and don't need special consideration to start, continue, or finish their work.

TACTIC Set time limits for work completion

Elem/Sec

Tell students before they begin to work on a task that they have a specified amount of time ("You will have 10 minutes to work on this assignment.") and stick to the time limit. Using this approach consistently not only provides the teacher with realistic information about how much work students can accomplish in a given time period, but encourages students to stay on task. Time periods can be shortened or lengthened based on task difficulty or information about previous performance.

STRATEGY: **Vary Methods During Practice**

Students look forward to doing different types of activities in school. They like using games and other activities as methods for practicing skills they are learning. Often, they will resist doing a worksheet, but will actively particpate in a game in which the same skills are being practiced.

TACTIC Use BINGO to practice any content

Elem/Sec

Make a copy of a BINGO board on a ditto or other inexpensive form of duplication. Have students place the content to be practiced in the twenty-five spaces of the BINGO board. For example, have students write their vocabulary words or math facts in the space of their worksheet. To play the game, have one student call out a definition (or the solution to a math fact) and have the other students mark it on their BINGO sheets. Follow the regular rules for BINGO to find a winner, who then becomes the "caller" for the next game.

TACTIC Use familiar games to practice reading

Elem/Sec

A popular adult game is called "WORD SEARCH." It consists of a matrix of letters that contains any number of words arranged horizontally, vertically, or diagonally. Most students have seen word search games and enjoy playing them with their reading words. Many students enjoy creating the games for others to play or for their own use at a later time.

DELIVERING INSTRUCTION: Provide Relevant Practice*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

PRINCIPLE

Keep Students Actively Involved

A key to effective teaching is the amount of time students spend actively involved responding to appropriate content and instructional activities. When they are delivering instructional presentations, effective teachers use the following strategies to keep students actively involved: select appropriate amounts of content; select appropriate pace; monitor performance regularly; use peers to improve instruction; provide ample opportunities for success; provide opportunities to fail; and monitor engagement rates.

STRATEGY: **Select Appropriate Amounts of Content**

Before actually teaching, it is difficult to identify appropriate amounts of content. Effective teachers rely on systematic monitoring during instructional presentations when making judgments about the appropriateness of the content they are presenting. They are ready to adjust assignments based on ongoing instructional evaluations.

TACTIC Address total lesson design in planning

Elem/Sec

When attempting to select an appropriate amount of content, it is helpful to think of the content in terms of all of the elements of effective lesson design: review, input, guided practice, independent practice, summary. If the content is so complex that an inordinate amount of time would be required to address each of these critical lesson steps, then narrow the content.

TACTIC Consider students' attention spans

Elem

Selecting appropriate lesson content requires knowledge and thought about students' abilities to sustain their attention throughout a lesson. Shorter attention spans require more specific and narrow lesson content.

TACTIC Consider learning readiness

Elem/Sec

Prerequisite skills and students' readiness for learning must be a consideration in selecting appropriate lesson content. Before planning instruction for a specific skill or content, all prerequisite skills should be identified. If students lack prerequisites, these skills must be taught first.

TACTIC Anticipate problems when planning

Elem/Sec

As part of the lesson planning process, think about where potential problems might occur and prepare an alternative. Knowledge of students' performance on previous skills will provide a basis for anticipating potential problems. Thinking about responses from the highest functioning student and the lowest functioning student in an instructional group will facilitate this process.

STRATEGY: **Select Appropriate Pace**

Appropriate pacing requires that adequate time be available for teachers to present content and for students to demonstrate understanding. Effective teachers control the pace of instruction by carefully planning goals and objectives of a lesson, providing sufficient examples, questioning understanding early, and reteaching quickly.

TACTIC Consider knowledge of previous performance

Elem/Sec

When planning new lessons, consider the learning pace that students have demonstrated on previous lessons. For example, if students were able to achieve mastery on 3 new reading words during a previous lesson, then it seems reasonable to expect that 4 new words might be an attainable goal. On the other hand, jumping to 10 is probably unrealistic.

TACTIC Speed up and slow down as needed

Elem/Sec

If students indicate a high level of success through their responses, pick up the lesson pace. If problems occur, slow down the pace to accommodate student needs.

TACTIC Be prepared with sponge activities

Elem/Sec

Being prepared with a variety of "sponge activities" (singing; counting to 100 by fives, tens, twos; playing hangman with spelling words; charades for reading vocabulary words) will allow teachers to fill in extra time left when a lesson is accomplished sooner than expected. These sponge activities will prevent teachers from dragging out a lesson unnecessarily to fill in scheduled time.

STRATEGY: **Monitor Performance Regularly**

Effective teachers provide immediate, frequent, explicit feedback when they deliver instruction. They monitor their students' performances to determine the extent and content of necessary feedback. They also use this information as a basis for changing content presentations and redirecting a lesson.

TACTIC Check for understanding throughout lesson

Elem/Sec

Ask questions frequently throughout a lesson to be certain that students are understanding. Students can respond chorally or individually. Be certain that all students are required to give a response at some point during the lesson.

TACTIC Check levels of learning with lowest student

Elem/Sec

Although all students should be required to give a response at some point in each lesson, it is a good strategy to check the lowest functioning students on critical lesson aspects. If those students understand the critical lesson elements then there can be reasonable assurance that all other students in the class also understand. However, it is very important that this tactic be applied with care, so that students do not feel as though they are being singled out. A quick pace of questioning can be alternated between several other students and a low-functioning student, so that the low-functioning students do not get the feeling that they are answering everything.

STRATEGY: **Use Peers to Improve Instruction**

Classroom peers often help teachers cope with individual differences in extremely heterogeneous groups of students. Many teachers find that peer-helping instructional arrangements are effective regardless of the composition of the student group(s).

TACTIC Select helpers from independent practice monitoring

Elem/Sec

Monitoring total class performance on the first two items of independent practice will enable a teacher to readily identify students who understand the skill and those who do not. Helpers can be selected from those who were successful with the first items on independent practice.

TACTIC Use peer tutoring as a review strategy

Elem/Sec

Choose students who are just slightly ahead of other students in skill mastery to do peer tutoring. The tutoring activity will serve as a meaningful review and also will expand available teaching resources.

TACTIC Use cooperative learning assignments

Elem/Sec

Have two students work together to complete a worksheet or assignment. Assign specific tasks related to assignment completion to each student (one reads the problem, one records the answer; one records the answer, one rechecks the answer). With this strategy, students can be grouped either heterogeneously or homogeneously. Remind students that they will receive a cooperative score or grade and that they are both accountable for the lesson content. Promote the notion of accountability by spot checking each student individually on performance.

Descriptions of procedures for cooperative learning activities can be found in *Project RIDE: Responding to Individual Differences in Education* (Beck, 1991).

TACTIC Use peers to provide feedback

Elem/Sec

Have students working in pairs discuss similarities and differences in answers to a quiz or homework assignment. Have them discuss and defend their responses and arrive at one correct solution for answers that differ.

STRATEGY: **Provide Ample Opportunities for Success**

During instructional presentations, teachers present new information, elaborate or extend previously presented content, conduct demonstrations of expected behaviors, or describe how to solve problems. Effective teachers structure these presentations so that students demonstrate understanding of the content presented.

TACTIC Check recognition level, then production level

Elem/Sec

When introducing a new skill or concept, initial questioning should be at a recognition level. At this level questions are posed by offering multiple choice responses and the response alternatives are manipulated to be initially obvious and then less obvious. After students have demonstrated success at the recognition level, pose questions that require students to produce the response on their own. If students have difficulty producing answers, drop back to the recognition level.

TACTIC Model expected performance for students

Elem/Sec

Modeling the expected response performance for students, prior to asking them to respond, will increase the probability of their success.

TACTIC Alternate between group and individual responses

Elem/Sec

Pose questions that require a group response and follow by questioning a specific individual. A student may have been unsure of the answer during the group response or may not have answered correctly. Individual questioning immediately following feedback about the group response will assure the student an opportunity to be successful.

STRATEGY: Provide Opportunities to Fail

Many students learn by making mistakes; in fact, trial-and-error learning is a very effective way of acquiring some content. Effective teachers take advantage of students' mistakes and use them as opportunities for corrective feedback, redirection, and subsequent learning.

TACTIC Help students accept failure

Elem/Sec

Inform students that making errors is part of learning at all ages for all individuals. Teach them that disappointment is an acceptable emotion that occurs in relation to failure but that it can be turned into anger or determination, the latter being the better alternative. Explain that determination means that you will keep trying and you believe that you will improve.

TACTIC Provide feedback that shows growth

Elem/Sec

Using graphs to provide feedback to students about their performance will allow them to see growth and progress even though they may initially perform at low levels of accuracy or rate.

TACTIC Require continuous performance improvement

Elem/Sec

Set individual student goals that are based on skill improvements and that are dynamic in nature, rather than static. For example, requiring a student to show three improvements on reading rate before going on to a new passage encourages the student to strive for higher levels of performance based on his/her own best previous score. Collecting frequency data (number of correct words read per minute, number of correct math problems answered per minute, etc.) is best suited to the continuous improvement requirement.

STRATEGY: **Monitor Engagement Rates**

For instruction to be effective, students should be actively engaged during content presentations. They should not spend much time waiting for things to happen. Effective teachers keep track of engagement rates and modify their instruction to include students when they notice that they are not involved.

TACTIC Call on every student

Elem/Sec

Be certain that every student in a class is required to respond at some point during a lesson. Asking questions that require a total group response either orally or through signaling is a tactic that maximizes student involvement.

TACTIC Avoid elimination games

Elem/Sec

Playing games that eliminate students who make errors should be avoided. The elimination process often removes students who have the greatest need for practice opportunities. Popular games that typically require elimination can be adapted so that a negative point is scored or a letter is awarded that spells a word designating the losing team.

TACTIC Avoid extended time with one student

Elem/Sec

During a group lesson, avoid spending extended time with one student having difficulty when that results in idle time for the remainder of the group. Assign peer tutors, prompt responses, or simply say, "I'll help you later," rather than reducing the engaged learning time for the majority of the group.

DELIVERING INSTRUCTION: Keep Students Actively Involved*

STRATEGY

TACTIC:

STRATEGY

TACTIC:

STRATEGY

TACTIC:

* Use this page to add your own tactics.

PRINCIPLE

Modify Instruction

All students do not learn in the same ways or at the same pace. Feedback from students is generally the best indication of a need to make changes in an instructional presentation. Effective teachers adjust their instruction to meet the individual needs of their students. They often rely on trial-and-error processes when deciding whether and when to make modifications in instructional presentations. They use different methods and materials to increase chances of meeting individual student's needs. Sometimes they provide information in different ways or provide additional review. Strategies they use include modifying lessons to meet student needs, providing additional instruction, and making adjustments in the pace of their lessons.

STRATEGY: **Modify Lessons to Meet Student Needs**

Regardless of time spent planning, instructional presentations sometimes need to be modified to meet the individual learning needs of students. Effective teachers use a variety of strategies when adjusting their instruction.

TACTIC Plan to be flexible

Elem/Sec

Anticipate possible learning problems and be prepared to be flexible. It is especially helpful to identify prerequisite skills or subskills of the lesson content prior to beginning instruction. Student difficulty often is related to a lack of prerequisite skills. Having identified these skills will assist the teacher in adapting instruction to accommodate these skill needs, if necessary.

TACTIC Alleviate problems without disrupting lesson

Elem/Sec

If problems occur with either the behavior or learning of students but the problem is not disrupting the group, attempt to alleviate the problem with intervention strategies that do not interrupt the flow of the lesson. Moving closer to the student, prompting a response, heightening the level of the particular student's involvement through questioning, or using his/her personal name in a problem are all examples of tactics that can be implemented while continuing the lesson and without calling undue attention to the initial problem.

TACTIC Prepare sufficient practice examples

Elem/Sec

In planning for a lesson, prepare enough examples of skills to allow more than adequate guided and independent practice opportunities, but use only the number needed to assure understanding. For example, if you are teaching students to capitalize first words in a sentence, write several examples on sentence strips. The sentence strips will provide flexibility in using only the number needed to teach the skill.

TACTIC Provide extended modeling or guided practice

Elem/Sec

If you discover that several students are having difficulty when you move to guided practice, return to modeling and extend this input. If students encounter difficulty when they move to independent practice, back up to guided practice and extend this step in the lesson.

STRATEGY: **Provide Additional Information**

For learning to occur, students must have developed prerequisite skills; they also need materials and activities at which they can succeed. Effective teachers adjust instruction to ensure that prerequisite skills have been mastered and build in time for remedial activities to foster success in students with special learning needs.

TACTIC **Task analyze skills**

Elem/Sec

As part of the lesson-planning process, break skills down into subskill hierarchies and prerequisites. Completing this analysis of a learning objective will promote identification of the causes of problems and will help pinpoint the area of skill development that requires adjusted intervention.

TACTIC **Pretest prerequisite skills**

Elem/Sec

Prior to beginning instruction on a learning objective, check students on the prerequisite skills either through oral or written responses. Keep track of performance leads and use information collected at later times to make judgments about progress.

STRATEGY: **Adjust Pace**

Effective teachers use different strategies to adjust the pace of their content presentations. Most find that it is better to cover material thoroughly rather than quickly. They also plan ample opportunities for practice and check for student understanding more frequently when adjusting the pace of instructional presentations.

TACTIC Minimize disruptions to control pace

Elem/Sec

Interruptions of instructional activities can greatly influence types and amounts of student responses to instruction. Effective teachers take preventive measures to reduce disruptions during instructional presentations. They establish and enforce classroom rules to reduce or eliminate chronic distractions (e.g., pencil sharpening, trips to restroom). They have all necessary instructional materials ready and available when instruction begins.

TACTIC Use outlines to control pace

Elem/Sec

Provide students with partially completed outlines that require minimal information to be complete. Have students follow the instructional presentation and note when new information is to be supplied. Place incomplete information at different points on the outline to control the pace of the instructional presentation.

DELIVERING INSTRUCTION: Modify Instruction*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

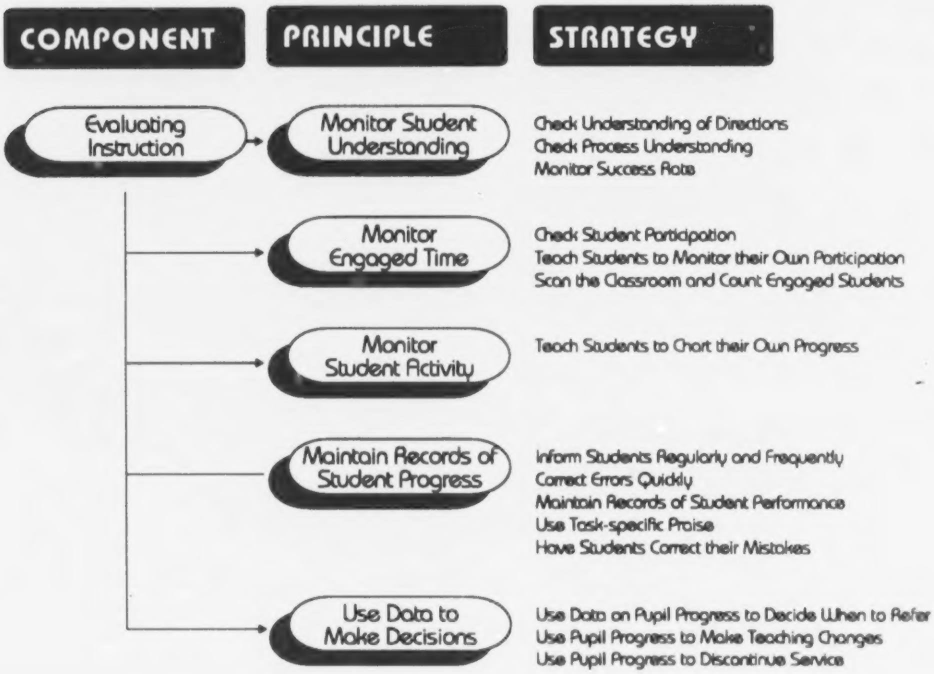
* Use this page to add your own tactics.

Evaluating Instruction

Evaluation is an important part of teaching. It is the process by which teachers decide whether the approach they are using is effective with an individual student. Teachers also use evaluation to decide whether the methods and materials they are using are effective. Evaluation data are used to make important decisions, such as whether to refer students to specialists, whether to change interventions, and whether (or when) to exit students from programs.

There are two kinds of evaluation: formative and summative. Both involve collection of data on pupil performance. Formative evaluation occurs during the process of instruction; the teacher collects data **during** instruction and uses those data to make instructional decisions. Summative evaluation occurs at the **end** of instruction, when the teacher administers a test to determine whether students have met instructional objectives.

Six principles of evaluating instruction include monitoring students' understanding, monitoring engaged time, maintaining records of students' progress, informing students of progress, using data to make decisions, and making judgments about students' performance.



COMPONENT	PRINCIPLE	STRATEGY
Evaluating Instruction	Monitor Student Understanding	Check Understanding of Directions Check Process Understanding Monitor Success Rate
	Monitor Engaged Time	Check Student Participation Teach Students to Monitor their Own Participation Scan the Classroom and Count Engaged Students
	Monitor Student Activity	Teach Students to Chart their Own Progress
	Maintain Records of Student Progress	Inform Students Regularly and Frequently Correct Errors Quickly Maintain Records of Student Performance Use Task-specific Praise Have Students Correct their Mistakes
	Use Data to Make Decisions	Use Data on Pupil Progress to Decide When to Refer Use Pupil Progress to Make Teaching Changes Use Pupil Progress to Discontinue Service

EVALUATING: Table of Contents

PRINCIPLE: Monitor Student Understanding 175
Check Understanding of Directions 176
Check Process Understanding 177
Monitor Success Rate 179
PRINCIPLE: Monitor Engaged Time 183
Check Student Participation 184
Teach Students to Monitor their Own Participation 186
Scan the Classroom and Count Engaged Students 187
PRINCIPLE: Monitor Student Activity 189
Teach Students to Chart their Own Progress 190
PRINCIPLE: Maintain Records of Student Progress 193
Inform Students Regularly and Frequently 194
Correct Errors Quickly 195
Maintain Records of Student Performance 196
Use Task-specific Praise 197
Have Students Correct their Mistakes 198
PRINCIPLE: Use Data to Make Decisions 201
Use Data on Pupil Progress to Decide When to Refer 202
Use Pupil Progress to Make Teaching Changes 203
Use Pupil Progress to Discontinue Service 204

PRINCIPLE

Monitor Student Understanding

Students must understand what teachers expect them to do in the classroom, which means that teachers must monitor the extent to which students understand directions. Effective teachers do more than simply ask a student, "Do you understand what I want you to do?" It is too easy for students simply to respond "yes" without actually having an idea of what they are expected to do. Effective teachers ask students to show them or tell them what they are going to do, and observe the student's response.

Students also must understand the process they are to go through in solving problems or completing classroom assignments. Effective teachers ask students to describe that process.

Effective teachers monitor student success rate in deciding whether or not students understand what it is they are to do. A low success rate may mean simply that students do not understand what they are to do.

STRATEGY: **Check Understanding of Directions**

Students' perceptions of what to do are not always consistent with what teachers intend. You must make sure that students clearly understand what you want them to do. Especially for elementary students and students who are disabled, goals must be explicitly stated. Make certain that your directions are at an appropriate level.

TACTIC Have the class recite what they are to do

Elem

Ask the entire class to engage in a choral response repetition of the instructions you have given them. This should be done before you ask individual students to repeat instructions.

TACTIC Have students restate goals

Elem/Sec

Have students restate the goals you have expressed. Ask several students to describe what they are expected to do. Check congruence between the goal, students' expression of the goal, and their indication of how they would achieve the goal.

TACTIC Have students check one another's understanding

Elem/Sec

Pair students and have them check one another's understanding of directions. Assign pairs to work together and have them check on one another at random intervals. You may want to set a timer at your desk and ask the students to check one another any time the timer goes off.

TACTIC Have students engage in self-monitoring

Elem/Sec

During a lesson have students monitor their own performance. At certain times in the lesson you should say, "Time to check to see if we are following directions. Put a check on your sheet if you are following directions."

TACTIC Check work to verify

Elem/Sec

On completion of specific tasks, randomly select students to describe and explain how they completed the tasks. Check their work to verify that they have followed directions.

TACTIC Reinforce students for understanding directions

Elem/Sec

When you call on individual students and ask them to repeat directions, or when students show from their work that they understood directions, reward them. Often it is enough to say, "I like the way you listened and the fact that you understand what you are to do," or "I like the way George listened to the directions and understands what he is to do."

STRATEGY: **Check Process Understanding**

Students employ sequences of processes in completing most instructional tasks. Effective teachers check to make certain that students understand the process they must go through. They do so by asking students to show them or tell them the process they will use to complete a task.

TACTIC Quiz students on the process they will use

Elem/Sec

Ask students to describe the process they will use to complete a task. Have them number the steps they will go through and then have them tally each step as they complete it.

TACTIC Quiz students on the process they used

Elem/Sec

Ask students to describe the process they went through to complete a task. Have them explain the steps they went through.

TACTIC Use probes with varying problem types

Elem/Sec

A probe is a short test that includes a few problems of varying types. Use of problems of varying types encourages the student to think as he/she completes the exercise. You may want to include a probe in which one or more problems cannot be completed. The student indicates his/her understanding of the process by indicating the particular problem that cannot be solved. Figure 15 (Example A) is a probe with only one problem type. Example B is a probe with varying problem types. Example A is the preferred probe.

FIGURE 15

Two Examples of a Probe with Only One Problem Type

A.	3 +1	4 +2	6 +2	3 +1	2 +4	9 +1	
B.	2 +1	4 -2	3 -1	5 +3	1 +4	2 -3	*The student must understand that this last problem cannot be solved. Ask why. (It is ussumed the student is learning basic single digit addition and has not yet learned the concept of negative numbers.)*

TACTIC Watch the student go through the process

Elem/Sec

Have a student go through the process of solving a problem. Watch the student complete the process and examine the extent to which the student understands the process necessary to solve the problem. You might also ask the student to verbalize each step as he/she goes through completion of a task. This makes the problem-solving process firm and also allows you to monitor it auditorily.

STRATEGY: Check Process Understanding

TACTIC Have students check one another

Elem/Sec Have students work in pairs and ask them to check the extent to which each understands the process necessary to complete a task or problem.

STRATEGY: **Monitor Success Rate**

Correct completion of work is evidence that students understand the goals of instruction and the processes to use in completing tasks. Incorrect or uncompleted work may be evidence of a lack of student understanding. Effective teachers gather data on student success rate.

TACTIC Chart student progress toward instructional goals

Elem/Sec

Keep a record of student progress. The kind of record you keep may range from a simple tally of the frequency of specific behaviors to a relatively complex logarithmic chart. The specific charting approach you use will be dependent on the design of the intervention. Rusch, Rose, and Greenwood (1988) describe charting procedures beginning on page 170. They describe procedures appropriate for the following designs:

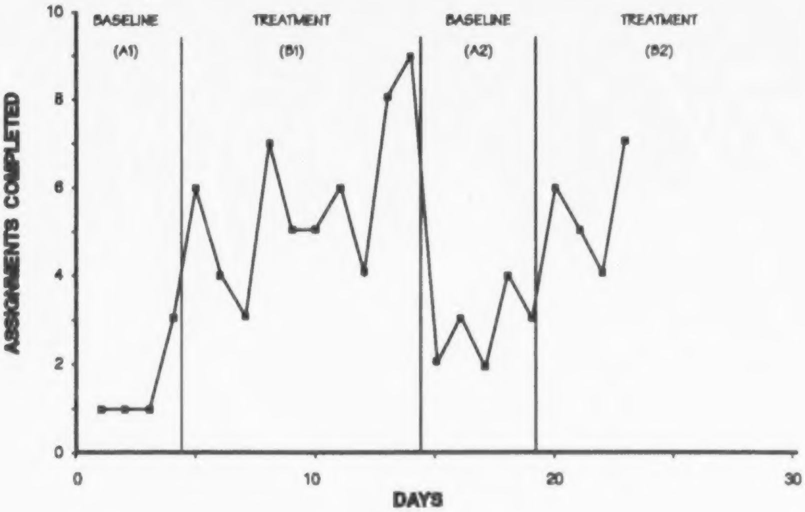
- Reversal (ABAB) Design
- Multiple Baselines Across Settings
- Multiple Baselines Across Situations
- Multiple Baselines Across Responses
- Multiple Baselines Across Persons
- Multiple Baselines Across Classes or Groups
- Changing Criterion Design
- Alternating Treatments Design

Figure 16 is a chart showing the number of academic assignments a student completed during baseline and treatment phases. The graphic representation of performance helps illustrate the extent to which the treatment was effective in helping the student complete more work.

STRATEGY: **Monitor Success Rate**

FIGURE 16

Number of Academic Assignments a Student Completed During Baseline and Treatment Phases



TACTIC Use student charting

Elem/Sec

Students can be taught to chart their own progress toward instructional objectives. There now are commercially available computerized programs that teach students to chart their own progress and chart the progress for the student.

TACTIC Use aim lines and charts to evaluate student progress

Elem/Sec

The use of aim lines is especially helpful when the teacher has a relatively long-range goal for the child and is interested in progress over time toward the goal. An aim line is a line connecting current level of performance to eventual goal. Let's suppose that the teacher wants to teach the words at a rate of 10 new words per week, and therefore expects that it will take 9 to 10 weeks to teach the child the words. A 10-week chart is made on which the teacher can chart student progress. The aim line will range from 3 words correct (the current level of performance) to 100 words correct (the eventual goal) across the 10 weeks. The student's progress can then be charted and rate of progress can be evaluated relative to necessary rate of progress.

STRATEGY: **Monitor Success Rate**

TACTIC Use peer monitoring

Elem/Sec

Have students monitor one another's progress toward completion of instructional goals. Create noncompetitive teams and assign different members to be recorders each week. Have teams display progress on charts that are distributed to team members.

TACTIC Task analyze charting and teach students to chart

Elem/Sec

Break the process of charting and monitoring one's performance into component parts. Teach students each of the parts.

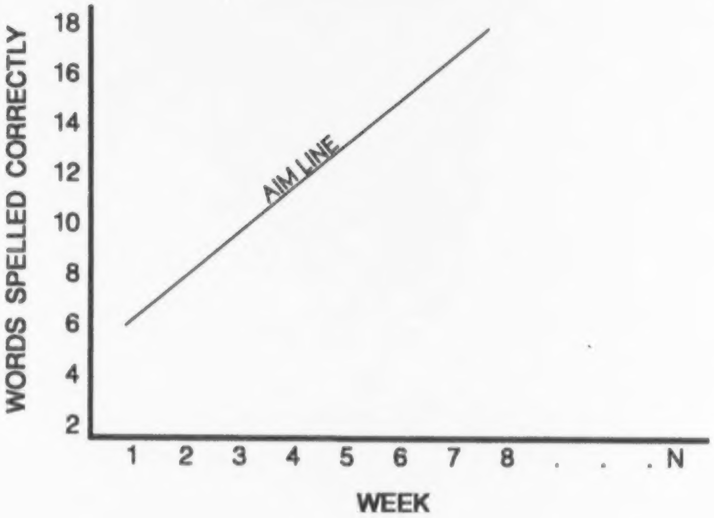
The student corrects his/her work and records on a chart the number correct or the number of errors.

- Student records dots on chart for number correct.
- Student enters goal for number correct.
- Student completes an aim line.
- Student uses data decision rules to make instructional decisions.

Figure 17 shows number of words spelled correctly. The goal for the number correct (from a list of 20) is 18. The aim line shows necessary weekly progress to reach the goal. The student is given a rule (e.g., any time your performance is below the aim line for 3 consecutive weeks, the instructional approach should be changed) to use in making decisions about when the approach should be changed.

FIGURE 17

Spelling Chart



EVALUATING INSTRUCTION: Monitor Student Understanding*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

PRINCIPLE

Monitor Engaged Time

Academic engaged time refers to the amount of time students are actively engaged in responding to academic content. There is a direct relationship between the amount of time students are actively engaged and the extent to which they profit from instruction. Yet, it is also important that students be actively engaged in the right kinds of activities. Students who answer questions and participate in discussions during instruction learn more in school. Effective teachers monitor the extent to which students are actively engaged, and participate in class activities and discussions.

Keeping track of student performance and progress is a time-consuming activity. Effective teachers teach students to monitor their own participation. And, effective teachers are vigilant. They continuously scan the classroom to spot students who are not actively engaged, and take steps to re-engage students who are not participating.

STRATEGY: **Check Student Participation**

Students who answer direct questions and participate in discussions during instruction learn more in school. Effective teachers monitor the extent to which students are actively engaged in responding to instruction and participating in class activities.

TACTIC Keep a tally chart

Elem/Sec

Keep a chart at your desk on which you tally each time you call on a student. Use the chart to call on students an equivalent number of times. You might also give students a chart at their desks on which they make a tally each time they respond.

TACTIC Use teams to chart participation

Elem/Sec

Assign students to teams. Award points to students who are participating in instruction or who are actively engaged in responding to academic content. Appoint the team captain to keep track of the points won by the team. Award prizes to the top point-earning team(s).

TACTIC Use a turn-taking system and limit turns

Elem/Sec

Distribute 3 to 5 index cards to each student (be certain to give every student the same number of cards). When students respond in class they are to hold their cards up. When you call on the student, take his/her card. When the student is out of cards, he or she is out of opportunities to respond. Make sure you alternate who you call on so that you do not get a bored student who cannot participate because he/she is out of cards.

TACTIC Use index cards

Elem

Use index cards with students' names on them and monitor how many times you called on the individual.

TACTIC Use a buddy system

Elem

When you ask a question have each student tell his or her neighbor the answer. Have the neighbor record the "good ideas" and award a point for each idea. Students also may be told to share their answers with their neighbors so that they each tell one another their response.

TACTIC Thumbs up - thumbs down

Elem

Periodically, ask students whether or not they are participating in instruction. Have students indicate thumbs up when they are participating, thumbs down when they are not.

STRATEGY: **Check Student Participation**

TACTIC Colored cards

Elem

Ask students at random intervals whether or not they are participating. Have them hold up a green card if they are participating, a red card if they are not, and a yellow card if they do not know. Have them count whether or not they are participating, or have their neighbor record the color of the card they hold up.

TACTIC Videotape and have students monitor their own behavior

Sec

Videotape the entire class. Then have students watch the videotape and chart the extent to which they are participating in class.

TACTIC Cognitive type (structured) assessment

Sec

Have students monitor their own participation in an activity by filling out a worksheet on completion of the activity. Have students answer the following questions:

- Was this a productive lesson for me?
- What did I do to help myself learn?
- What interfered with my learning?
- What might I do next hour to help me learn better?

STRATEGY: Teach Students to Monitor their Own Participation

While it is true that student performance improves when teachers monitor their engagement level and redirect unengaged students, monitoring is a time-consuming and labor-intensive task. Students can be taught to monitor their own engaged time and class participation.

TACTIC Use an interval recording procedure

Elem/Sec

At regular intervals (preferably of varying time lengths), tell students to put a check on a tally sheet if they are actively engaged in instruction. Call them by name.

TACTIC Have students record one another's participation

Elem/Sec

Assign students to pairs. At regular intervals have each student record whether or not his/her partner is engaged.

TACTIC Use teams of students

Elem/Sec

Assign students to teams. At regular intervals have the team captain record the number of team members who are actively engaged/ participating.

TACTIC Use a variable checking procedure

Elem/Sec

You or a paraprofessional can circulate through the class during seatwork assignments or independent working time and record on a variable schedule those students who are actively engaged or participating in instruction.

TACTIC Use a kitchen timer to set intervals

Elem

Set a kitchen timer on your desk to ring at random intervals. Each time the timer rings the students are to chart whether or not they are actively participating in the lesson.

TACTIC Use a taped message to monitor attention

Elem

Use a tape recorded, random interval beeping noise. Have students chart their own participation or on-task behavior

TACTIC Have students reward themselves

Elem/Sec

At random intervals have students give themselves five points if they are listening to the teacher.

STRATEGY: **Scan the Classroom and Count Engaged Students**

Effective teachers are vigilant. They continuously scan the classroom to spot students who are not actively engaged and actively responding to instruction.

TACTIC Look for patterns in engaged time

Elem/Sec

During seatwork, you should scan the class every X minutes. Record students who are unengaged, and look for patterns. If specific students are regularly not engaged, refer to the Delivering Instruction section of this manual to learn procedures to get the students re-engaged.

TACTIC Ask students to check their own engagement

Elem/Sec

Monitor by walking around the class and asking students questions like "Tell me what you are doing." Use this technique sparingly, because it can interfere with the behavior you want. Another approach is to use an auditory or tactile means of reminding yourself at specified intervals to check if students are engaged. Then, as you wander around the class and you find the cue goes off while you are next to a student who is engaged, you can put a check in a box on a paper on the student's desk.

TACTIC Make public displays of engaged students

Elem/Sec

At periodic intervals count the number of students who are on task and publicly display the number. Or, publicly display the percentage of students who are on task. Students who are not engaged will feel pressure from their peers to become engaged. When you begin this, explain to the students that you will be looking for engaged workers.

EVALUATING INSTRUCTION: Monitor Engaged Time*

STRATEGY	

TACTIC:

STRATEGY	

TACTIC:

STRATEGY	

TACTIC:

---

* Use this page to add your own tactics.

PRINCIPLE

Monitor Student Activity

Teachers must keep records of student progress to know the extent to which students are profiting from instruction. Record-keeping can be formal or informal. Sometimes teachers chart both student performance and goals. Charting student progress can be a lot of work. Effective teachers teach students to chart their own progress and to keep records of progress.

STRATEGY: **Teach Students to Chart their Own Progress**

Keeping records on large numbers of students can be a challenge. Effective teachers teach students to chart their own progress. This frees up teacher time, keeps the student actively involved, and gives the student a sense of accomplishment.

TACTIC Use acetate sheets

Elem/Sec

In charting student performance students sometimes make errors or you must change record sheets often, thereby using up large numbers of sheets of paper. One way around this is to develop acetate overlays for graphs. Students can record their progress on the acetate sheet using a crayon or marker. The sheet can be easily erased and re-used.

TACTIC Use index cards to monitor progress

Elem/Sec

Have students create their own monitoring system using index cards (Figure 18). Periodically check the cards and compile written reports from them for use in parent conferences and other evaluation activities.

FIGURE 18

Monitoring System

What I am counting:

Day	Count
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

What I am counting:

Day	Week 1	Week 2	Week 3
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

EVALUATING INSTRUCTION: Monitor Student Activity*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

PRINCIPLE

Maintain Records of Student Progress

Students perform better in school when teachers keep them informed about their progress. Feedback and corrective procedures are an integral part of the mastery model, and the importance of feedback is consistently mentioned in the various models of school learning, empirically documented teaching programs, and literature on instructional psychology.

For feedback to be effective, it must be task-specific and explicit. Students benefit from being told what makes their answers right or wrong. General praise, like saying "Good work," typically is ineffective.

The most effective feedback gives students increased opportunity to respond. Therefore, teachers need to use process feedback (provide students with specific cues to increase rate of accurate responses) rather than terminal feedback (right, wrong). Effective teachers use error correction procedures to provide cues and prompts to guide the student to the correct answer.

Feedback is most effective when it is immediate. Immediate knowledge of results enables students to correct what they have done and to work to respond appropriately.

STRATEGY: **Inform Students Regularly and Frequently**

Effective teachers monitor student performance directly and frequently. They keep students informed of their performance and progress on a regular basis. Student performance is enhanced when they get direct, frequent feedback.

TACTIC Use acetate sheets to record completed assignments

Elem/Sec Develop lists of activities that students are to perform. Give them acetate sheets to put over the lists and to use in recording tasks or activities completed.

TACTIC Use public displays of students' work

Elem/Sec Display students' performance in a public way. When you have students chart their progress, have students put their charts on the bulletin board or some other public place.

TACTIC Inform parents weekly of student performance

Elem/Sec Meet with parents and set up a scheduled day when you will inform them, in writing or by phone, of the extent to which the student is completing work and making progress toward instructional goals.

TACTIC Use surprise checks

Elem/Sec On an intermittent basis collect students' work, check it, and provide feedback.

TACTIC Inform students at specific intervals

Elem/Sec Set a specific time each day when the student will be informed of his/her performance or progress. You will have to use your own judgment to decide whether it is wise to tell students specifically when they will receive feedback. Some students need to know when feedback will occur, while for others it is important to keep them anticipating feedback without knowing when you will provide it.

STRATEGY: **Correct Errors Quickly**

When students make errors, the errors should be called to their attention quickly and they should be given an opportunity to re-do their work correctly.

TACTIC Provide error correction immediately

Elem/Sec Immediately upon completion of work, collect the student's paper, correct the work, and give the student feedback.

TACTIC Call attention to work completed correctly

Elem/Sec Take a green pen or pencil (not a red one), mark with a "+" questions, items, or problems the student answered correctly. Then allow the student to re-do items that are not marked "+." Assist the student in answering items correctly.

TACTIC Use an acetate sheet to correct students' work

Elem/Sec Use an acetate sheet on which you correct students' work. The student is able to correct errors, and you then erase your corrections from the acetate sheet.

STRATEGY: **Maintain Records of Student Performance**

Effective teachers keep formal or informal records of student progress. The records consist of evaluations of performance on assignments, quizzes and tests, or charts of progress toward instructional goals. The records are used to monitor student activity and make decisions about the appropriateness of instructional programs.

TACTIC Use a computer software program

Elem/Sec

Find out if you can purchase a computer software program that will enable you to keep graphic records of student progress and performance. Fuchs, Hamlett, & Fuchs (1991) produced a program called *Monitoring Basic Skills Progress.*

TACTIC Chart antecedents and consequences of behaviors

Elem

You may seek assistance developing interventions for students with behavior problems. You will be ahead of the game if you keep formal charts or records listing the problem behavior, when it occurred, the behavior that immediately preceded the problem behavior, and the effect of the behavior. You do not need to use a formal or elaborate recording scheme. Simply make four columns on lined paper, with the columns headed Time, Behavior, Antecedent, and Consequence. You or a behavioral consultant will be able to use this record to identify patterns of behavior or antecedents that trigger problem behaviors.

STRATEGY: **Use Task-specific Praise**

It is not enough simply to tell students that they have "done good work" or performed incorrectly. Students must be told specifically what they did right or wrong with statements like, "You did a very nice job of matching the capitol cities to the states; you got them all correct."

TACTIC **Match verbal praise with extrinsic reinforcers**

Elem/Sec When you provide task-specific verbal praise, record the number of times you do so for specific students. Then reward students who achieve the predetermined criterion level with an extrinsic reinforcer.

STRATEGY: **Have Students Correct their Mistakes**

High rates of accurate responding are highly related to achievement in most academic areas of instruction. Practicing errors is a sure way to learn how to do something incorrectly. When students perform incorrectly, they should be shown the correct response and required to correct their errors.

TACTIC Ask students to explain their solutions

Elem/Sec

Ask students to show you how they arrived at an answer. As students do so, take advantage of opportunities to provide corrective and supportive feedback. Help students correct mistakes quickly.

TACTIC Provide differential grading for correct responding

Elem/Sec

Correct independent work assignments by giving two points for appropriate responses. Have students correct incorrect items and award one point for correct responses provided on second effort.

EVALUATING INSTRUCTION: Maintain Records of Student Progress*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

* Use this page to add your own tactics.

PRINCIPLE

Use Data to Make Decisions

There is no way to decide ahead of time the specific instructional approaches and strategies that will work best for all students. Effective teachers use formal and informal records to make important decisions about students. Decisions about whether to change instructional approaches, whether to refer students for psychoeducational evaluation, whether to place students in special programs, and whether to exit students from programs are made on the basis of data collected by teachers. The most useful data for making these decisions are direct data on student progress.

STRATEGY: Use Data on Pupil Progress to Decide When to Refer

Teachers often must decide whether or not to refer students to related services specialists like school psychologists and speech and language clinicians. When teachers collect data on pupil progress they are able to make data-based decisions about whether and when to refer.

TACTIC Engage in normative peer comparison

Elem/Sec

Chart the performance of the students in your class. Make changes in the nature of interventions for students who perform poorly relative to their peers. Keep track of all of these interventions because they may be useful if (as a last resort) you refer the student to special education.

TACTIC Engage in intra-student comparison

Elem/Sec

You may regularly use aim lines (a line connecting current levels of performance to eventual goals) to project anticipated pupil performance and progress. Chart the student's progress in comparison to the aim line. When students fall below the aim line for three consecutive days make changes in the instructional program. After five changes consider contacting the Teacher Assistance Team or making a formal referral for assistance.

STRATEGY: **Use Pupil Progress to Make Teaching Changes**

Effective teachers gather data on pupil performance, chart pupil progress toward instructional goals, and make changes in instruction when insufficient progress is evidenced.

TACTIC Use functional analysis to plan instruction

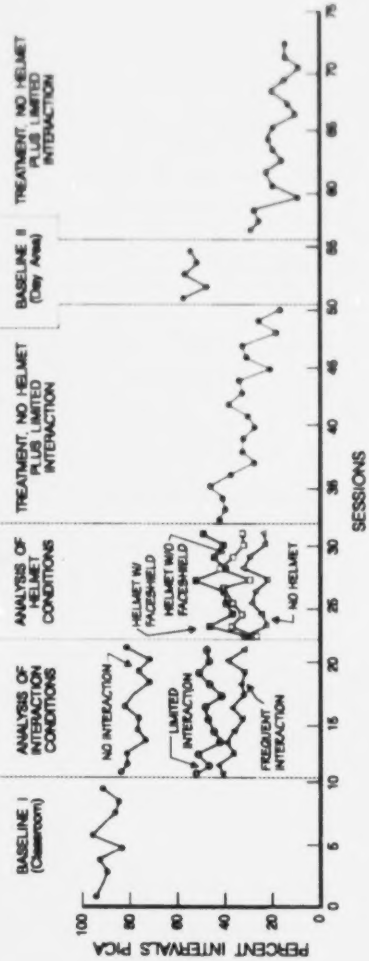
Elem/Sec

Functional analysis is a procedure used to determine empirically the relationships between variables in the environment and target behaviors. The practice is used to identify variables that are controlling target behaviors and to plan ways to modify the behaviors. Shapiro (1989) listed the steps in functional analysis. The method begins with collection of data to identify potential variables that may be controlling a behavior. The teacher may interview the parents or caretakers, or ask the child to learn variables that may be influencing or controlling a behavior. Hypotheses are then generated about variables that may be controlling the behavior, and data are collected using an alternating treatment design. The information is used to keep track of interventions that work.

Figure 19 is taken from a study by Mace and Knight (1986). Staff interaction was used as a treatment for pica (eating inappropriate objects); a helmet and a face mask was also used to treat the same behavior. An analysis of the chart shows that limited interaction with no helmet produced the greatest reduction in problem behavior. (The figure is from Mace & Knight, *Journal of Applied Behavior Analysis*, 1986, *19*, page 415).

FIGURE 19

Treatment for Pica



STRATEGY: **Use Pupil Progress to Discontinue Service**

The most frequent criterion used in making decisions about whether or when to discontinue services is student age or time in program. Effective teachers do not rely on these indices alone. Rather, they monitor pupil progress and use these data to decide whether to discontinue services.

TACTIC Keep records of goal attainment

Elem/Sec

You regularly set goals for individual students. You can use some of the methods and procedures that we have described for keeping track of progress toward goals. When students meet criteria for goal accomplishment, discontinue instruction to the goal and shift goals or instruction.

TACTIC Videotape pre- and post-intervention performance

Elem/Sec

Once you have taught a student for a period of time you may lose sight of just where the student was before you intervened. It is helpful to videotape students attempting to perform criterion tasks or behaviors both before and after intervention. Then you have a record of progress.

EVALUATING INSTRUCTION: Use Data to Make Decisions*

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

STRATEGY	
TACTIC:	

---

* Use this page to add your own tactics.

References

Beck, R. (1991). *Project RIDE: Responding to Individual Differences in Education.* Longmont, CO: Sopris West.

Center for the Study of Reading. (1990). *A Guide to Selecting Basal Reading Programs.* Champaign, IL: University of Illinois.

Christenson, S.L., Ysseldyke, J.E., & Thurlow, M.L. (1989). Critical instructional factors for students with mild disabilities: An integrative review. *Remedial Special Education, 10,* 21-31.

Everson, C.M., Emmer, E.T., Clements, B.S., Sanford, J.P., & Worsham, M.E. (1989). *Classroom management for elementary teachers* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Fuchs, L.S. & Deno, S. (1991). Paradigmatic distinctions between instructionally relevant measurement models. *Exceptional Children, 57,* 488-500.

Fuchs, L.S., Hamlett, C., & Fuchs, D. (1991). *Monitoring Basic Skills Progress.* Austin, TX: Pro-Ed.

Gaskins, I. & Elliott, T. (1991). *Implementing Cognitive Strategy Training Across the School.* Boston, MA: Brookline Books.

Hudson, F.G., Colson, S.E., Welch, D.L., Banikowski, A.K., & Mehring, T.A. (1989). *Hudson Educational Skills Inventory.* Austin, TX: Pro-Ed.

Irwin, J.W. & Baker, I. (1989). *Promoting active reading comprehension strategies: A resource book for teachers.* Englewood Cliffs, NJ: Prentice-Hall.

Mace, F.C. & Knight, D. (1986). Functional analysis and treatment of severe pica. *Journal of Applied Behavior Analysis, 19,* 409-418.

Markwardt, F. (1989). *Peabody Individual Achievement Test.* Circle Pines, MN: American Guidance Services.

Newcomer, P. & Curtis (1990). *Diagnostic Achievement Battery - 2.* Austin, TX: Pro-Ed.

Rusch, Rose, & Greenwood. (1988). *Introduction to Behavior Analysis in Special Education.* Englewood Cliffs, NJ: Prentice-Hall.

Salva, J. & Hughes, C. (1990). *Curriculum-based Assessment: Testing What is Taught.* New York: Macmilton.

Shake (chapter). (1991). *Improving basal reading instruction* in P.N. Winogrod, K.K. Wixson, & M.Y. Lipson (Eds.). Teachers College Press.

Shapiro, E.S. (1989). *Academic Skill Problems: Direct Assessment and Intervention.* Guilford Press.

Sheinker, J. & Sheinker, A. (1989). *Metacognitive Approach to Study Strategies.* Rockville, MD: Aspen.

Sonnenschein, J.L. (1983). *Basic Achievement Skills Individual Screener.* San Antonio, TX: The Psychological Corporation.

Taylor, B., Harris, L.A., & Pearson, P.D. (1988). *Reading Difficulties.* New York: Random House.

Tests in Basal Reading Programs in *A Guide to Selecting Basal Reading Programs,* by the Center for the Study of Reading (1990). Champaign, IL: Unviersity of Illinois.

Tierney, R.J., Carter, M.A., & Desai, L.E. (1991). *Portfolio Assessment in the Reading-writing Classroom.* Norwood, MA: Christopher-Gordon Publishers.

Tucker, J.A. (1987). Curriculum-based assessment is no fad. *The Collaborative Educator, 1*(4), 4-10.

Walker, H.M. & Walker, J.E. (1991). *Coping with Noncompliance in the Classroom.* Austin, TX: Pro-Ed.

Ysseldyke, J.E. & Christenson, S.L. (1987). *The Instructional Environment Scale.* Austin, TX: Pro-Ed.

Index

A

accountability 105
achievement tests 20
active decision-making 39
active responding 105
adapting instruction 166
aim lines 180
allocated time 76
alternating treatments 179
anxiety 132
attendance 76
attention 105
automaticity 146

B

behavioral objectives 34
brainstorming 47
buddy system 184

C

chart 179, 184
charting 180, 181, 190
check understanding 176
check work 176
checking 186
classroom environment 61, 85
classroom rules 56
classroom space 73
communicating 105
compliance 56, 59, 66
conceptual learning 27
consequences 65, 111
content 34, 40
contextual variables 28
contigency contracting 47
cooperative learning 38, 159
corrections 195
critical thinking 119
curriculum-based measures 21, 30

D

deciding what to teach 19
decision-making 67
direct instruction 118
direct assessment 21
directions 80, 113
discipline 65
discrepancies 30
discrimination learning 27
disruption 62
disruptive behavior 62

E

engaged time 187
environmental inventory 22, 41
error correction 195
errors 78
expectations 39, 45

F

factual learning 27
feedback 86, 112, 194, 198
flexibility 132
functional analysis 42, 203
furniture 28

G

generalization 94
goal notebook 48
goals 48, 176, 179

goals and objectives 34, 35
goals, objectives, and standards 48
grouping arrangements 28, 38
grouping structures 38
gruop size 28
group structure 28

H

home 81

I

importance 24
independent work 78
informal assessment 21, 22, 30
informal reading inventories 22
instructional materials 37
instructional methods 37
instructional objectives 34
instructional options 37
instructional pacing 79
Iinstructional planning 15
instructional style 73
instructional time 72
interest 105
interval recording 186

L

learning demands 27
learning strategy 123
learning time 76

M

mastery 36, 39
mastery tests 22
materials 37
mini-groups 38
misbehavior 111
modality preference 37
monitor 78, 186
multiple baselines 179
mystery motivator 47

N

nonacademic 77
nonattention 105
noncompliance 65
norm-referenced tests 20
normative peer comparison 202

O

outcomes 30

P

pace 39, 79, 157
parents 92
peer monitoring 181
peer normative approach 36
peer tutoring 91, 159
peer-directed learning 46
performance discrepancies 30
performance standards 25, 36
physical arrangement 74
portfolio assessment 23
practice 112
praise 61, 91, 140
prerequisite skills 104
Pretesting 22
probes 177
problem-solving 177
problem-solving strategies 118
procedural learning 27
procedures 70
process understanding 177
prompt 143

Q

questions 78

R

rapport 91
readiness 35
records 196, 204
reinforcement 61
rewards 65, 131
role-play 47, 60
rule complaince 59
rule formulation 57
rule learning 27
rule-making 56
rules 56

S

schedule 70, 73
scheduling 72
school records 40
scope 35
self-image 66
self-management 66
self-monitoring 59, 66, 176
self-questioning 124
self-recording 80
sequence 26
Sequence of Instruction 26
sequential 36
short-term goals 25
signals 105
sociometric scale 28
sociometric scale 28
standardized tests 20
standards 34, 41
stress 132
success 112
success rate 41

T

tally chart 184
task analysis 24
task avoidance 62
teacher effectiveness 88
thinking skills 118
time 49
transitions 75
turn-taking 184

U

understanding 105
unit mastery tests 22

STEI Training Available

A one-day workshop in the systematic use of *Strategies and Tactics for Effective Instruction* (*STEI*) is available. In the workshop, you will learn:

- **More about the complexity of instructional intervention;**
- **Factors that interact to affect intervention effectiveness;**
- **How to generate effective teaching tactics of your own; and**
- **Interventions that work.**

Plus, you will be given the opportunity for action planning using the *STEI* system for:

- **Individual student interventions;**
- **Instructional consultation;**
- **Prereferral intervention;**
- **Teacher training tools; and**
- **Teacher assistance team (SST, TAT, etc.) resources**

Costs for *STEI* workshops vary. Please call Sopris West for details at (303) 651-2829.

OTHER PUBLICATIONS FROM THE AUTHORS OF ***STEI***

The Instructional Environment System-II (TIES-II)

A System to Identify a Student's Instructional Needs

James Ysseldyke and Sandra Christenson

TIES II
THE INSTRUCTIONAL ENVIRONMENT SYSTEM-II

First published in 1987, *TIES* provided the first comprehensive methodology for gathering data on the extent to which components of effective instruction were present in students' instructional environments. *TIES* has now been updated and expanded as *TIES-II*.

Based on the belief that student performance in school is a function of an interaction between the student and the learning (instructional) environment, *TIES-II* provides a set of observational and interview forms, administration procedures, and an organizational structure that allows educators to both identify and address the instructional needs of individual students. *TIES-II* can be used to assess the learning needs of all students, but is especially useful when applied to prereferral intervention.

TIES-II enables professionals to identify ways to change instruction—or the learning environment—so that the student will respond to instruction more positively, and thus more successfully. *TIES-II* provides education professionals with essential information for:

- Prereferral Intervention;
- Instructional Consultation;
- Student/Staff Support Teams (SSTs, TATs, etc.);
- Intervention Assistance; and
- Collaborative Intervention Planning.

TIES-II can be used in multiple settings (regular classrooms, homes, special education) and in different content areas. *TIES-II* is meant to be used flexibly. The educator decides what information will be gathered, using which parts of the system, by whom, and where. **$47.50**

50 Simple Ways To Make Teaching More Fun

If You're a Teacher You Gotta Have This Book!

Bob Algozzine

This useful little book, written for both beginning and experienced teachers, provides suggestions and practical tips that can be used right away without special preparation or materials.

If you are preparing to teach this book is for you. It is full of down-to-earth know-how and practical hints they don't provide in college—like how to use BINGO and other games to help students practice any content or how to reduce bothersome behavior with a simple recording system.

If you are already teaching this book is for you. It is full of practical information and sample worksheets you search for in teacher workshops—like how to use PALINDROMES to help students practice math or how to encourage students' creative thinking.

Humorous examples and real-life stories illustrate these simples ways to make teaching fun. $14.95

Simple Ways To Make Teaching Math More Fun

Elementary School Edition

Bob Algozzine & James Ysseldyke

This little book is full of innovative ideas and tactics you can use immediately to reach your tough-to-teach students and make teaching math fun again.

Included are common sense tips on effective planning, classroom management, and presenting and evaluating instruction. Pull from this "bag of tricks" novel techniques that are fun to implement and fun for your students, such as open worksheets, BINGO and card games for content practice, palindromes, lotteries, alternative algorithms, in-class field trips, math tricks and mind teasers, and problem-solving activities that stress exploration and encourage curiosity.

Show your students new ways to use and look at numbers, and stay one step ahead of the tough-to-teach with *Simple Ways To Make Teaching Math More Fun*. $14.95

Sopris **West**

ORDER FORM

(Same as Billing Address)

BILLING ADDRESS

SHIPPING ADDRESS

PHONE

PHONE

QTY.	CODE	PRODUCT TITLE	UNIT PRICE*	TOTAL PRICE
	31STEI	*Strategies and Tactics for Effective Instruction (STEI)*	$29.95	
	48KIT	*The Instructional Environment System-II (TIES-II)* Kit includes: • 1 Manual • 1 Forms Set (Each Forms Set includes 15 copies of each of the 4 forms.)	$47.50	
	50WAYS	*50 Simple Ways To Make Teaching More Fun*	$14.95	
	50MATH	*Simple Ways To Make Teaching Math More Fun*	$14.95	
			Subtotal	
			Shipping/Handling**	
			TOTAL AMOUNT DUE	

* Prices subject to change without notice.

** 10% of total order. $3.50 minimum. Additional shipping charges will be assessed for orders outside the continental United States.

Method of Payment

☐ **VISA**

☐ **MasterCard**

Credit Card Number ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Expiration Date ____ / ____

Print cardholder name exactly as it appears on card.

Cardholder Signature

☐ Check/Money Order
(Make payable to **Sopris West**.)

☐ Purchase Order No. ____________
(A copy of P.O. MUST be enclosed.)

3 Easy Ways to Order

PHONE

1-800-547-6747

FAX

(303) 776-5934

MAIL

Sopris West
1140 Boston Avenue
Longmont, CO 80501

Published by

Sopris West, Inc. • 1140 Boston Avenue • Longmont, Colorado 80501

BEST COPY AVAILABLE